

MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XXXVI. No. 5
WEEKLY.

BALTIMORE, AUGUST 25, 1899.

\$4.00 A YEAR.
SINGLE COPIES, 10 CENTS.

Manufacturers' Record.

PUBLISHED EVERY FRIDAY BY THE
Manufacturers' Record Publishing Co.
RICHARD H. EDMONDS, President.
OFFICE: MANUFACTURERS' RECORD BUILDING,
BALTIMORE.

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SUBSCRIPTION, - - - \$4.00 a Year.
TO FOREIGN COUNTRIES, - - 2½. 6d. a Year.

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A Prediction of Higher Prices for Cotton.

The cotton crop is now at a critical stage, especially in Texas, where the lack of sufficient rains may have a very serious effect upon the final yield. A Galveston banker, who has for years watched the crop of that State very carefully and noted all conditions affecting it, advises the Manufacturers' Record that the maximum yield of the State cannot be over 3,000,000 bales, and may drop half a million bales below this. He claims that all conditions of crop, world supply, demand for cotton goods and general prosperity indicate the probability of a very much higher range of prices than we have had for several years. The critical time, he states, is during the next week or ten days, and unless copious rains are abundant throughout Texas within that period the yield will be so greatly reduced as to result in a very sharp advance in prices. He holds that cotton will inevitably bring an advance in price over present figures, and will soon range itself alongside of iron, beef and other products, which are now yielding such excellent profits. His position in the business world justifies a careful consideration of his views.

The programme for the celebration of the 150th anniversary of the formation of York county, to be held at York, Pa., September 3-6, is full of promise, not only of enjoyment for thousands of visitors who will be attracted by parades and illuminations, but also of a practical demonstration of the resources of the city as a flourishing American manufacturing community. The South has a direct interest in the city, as it is a supplier of many manufactures for that section, as is indicated by the large number of advertisers in the Manufacturers' Record.

As long as the United States imports more than \$32,000,000 worth of cotton goods it is useless to talk of too many mills in the United States.

The Southern Railway Annual Report.

The directors of the Southern Railway Co. have declared a dividend of 1 per cent. on the preferred stock, payable October 4 next to stockholders of record at the close of business September 11, 1899. The report of the company shows gross earnings during the past fiscal year of \$25,353,686.07, an increase of \$4,257,847.32; operating expenses and taxes, \$17,356,355.37, an increase of \$2,854,490.93; net earnings from operations, \$7,997,330.70, an increase of \$1,403,356.39; income from other sources, \$328,469.81, a decrease of \$19,908.27; interest and rentals, \$6,207,252.80, an increase of \$344,484.91; other deductions from increase, \$24,028.23, a decrease of \$48,543.18, leaving a balance to credit of profit and loss account of \$2,094,519.48, an increase of \$1,087,506.39. The report summarizes the acquisitions during the year of other lines aggregating about 700 miles by the Southern Railway, giving the system a mileage of nearly 6000, and alluding to the establishment of new industries in its territory, says:

The development of manufacturing industries in the South and upon the Southern Railway Co.'s lines continues to be very marked and encouraging. The greatest activity is in connection with the iron industry and in the manufacture of textile fabrics, but there is also a steady growth in diversified manufactures, including such articles as wagons, furniture, agricultural implements, brick and tiles, glassware, canned goods, leather, etc. The most important development of recent years, however, is the inauguration of a large and substantial scale of the manufacture of Southern iron into steel by the open-hearth or basic process. With this industry firmly established, as it now promises to be, the market for the output of Southern furnaces will be greatly widened, and the advantages of the South in the matter of cheap production of pig iron will be still further emphasized to the increased profit and benefit of that entire section of the country, not only in the sale of the steel itself, but in the creation of numerous collateral manufactures for converting it into finished products.

The report illustrates strikingly the results of the application of a broad-minded liberality, a practical knowledge of transportation and skill in financial operations in the conduct of railroads. The enterprise which the Southern Railway has shown in attracting to its territory and aiding in building up there numerous industries and attracting a substantial population to the South is on a par with its action in preparing, by betterments of road-bed and rolling stock, and by acquiring, whenever possible, links that have been made paying, for the certain increase of traffic from such a policy. The reorganization scheme appeared at one time almost an impossibility, such was the condition of the roads upon which the great Southern Railway system has been developed. But the men concerned in the reorganization knew the capabilities of the South and the results which would come from a wise and practical management of a transportation line for the development of those capabilities. The effects of the work of five years, as indicated in the

report, are gratifying not only to the South, but to the security-holders and the management of the Southern Railway.

Improved Cotton-Baling.

Alluding to the organization of a third company to promote the round baling of cotton, the Boston Journal of Commerce says:

If one may judge from the activity in invention and the organization of companies, the cotton bale is "doomed" in the future to be decently wrapped. All of the systems which have been introduced lately, whether round or square bale, have such decided merits over the want of system that has so long prevailed that any of them would be welcomed by the buyer or cotton dealer. The great difficulty to secure the adoption of any of these methods is to overcome the prejudices, or the want of enterprise, perhaps, to state it more correctly, of the proprietors of the thousands of small ginneries scattered throughout the cotton-growing belt. The adoption of some of these systems would mean the discontinuing of a large number of these ginneries, and no matter how perfect the system of baling by the new devices, or how desirable to those handling the bales, their proprietors could not naturally be expected to look with a very favorable eye upon a system that tended to deprive them of their occupation. Anything that tends to a monopoly is not very popular in the South, and the opposition to the round bale there seems to have arisen, in a measure, from the methods of introducing it, which it was thought would eventually tend to a monopoly of the business. This feeling is something that will have to be overcome. It can only be done gradually, and this will probably be accomplished through the enhanced price which cotton will bring that is baled by any of these improved processes.

The Journal of Commerce is published where consumers of cotton may appreciate the advantages of improved baling methods. The Columbia State is published where the advantages may be obvious to purchasers of cotton. It says it has never taken much stock in the argument that the round bale must be fought because controlled by a "trust," and adds:

Nor will the planters be greatly moved by the talk of a trust if the round bale is all that is claimed for it and results in material economies to the producer. Looking at the matter from the standpoint of the men who raise the staple, we can see that far too much has been taken out of the cotton bale by middlemen, and that the larger interest of the South is in the system which shall save most to the producer, who, God knows, needs all the relief he can get. Yet we have no enmity for the compress men or the ginneries, and if by improved methods they can give the farmers better service and better prices for their cotton, we wish them success in those methods. It will be admitted at least that the introduction of the round bale has had the good effect of forcing the square-bale people to improvements which otherwise they might never have effected. Let the competition proceed. It has long been needed, and it cannot fail to be of advantage to the grower of the cotton.

Ever since a practical plan has been offered for improved methods in handling cotton, for which the Manufacturers' Record has contended for a long time, there has been a persistent effort to prevent the improvement by means of appeals to prejudice, based upon the ignorance of facts. A perusal of the two extracts from papers in different sections of the country clearly demon-

strates the fallacy of the arguments which have been advanced against the round bale, and should open the eyes of the growers to the animus and tactics of the opposition.

Rebuke to Demagogues.

In reply to a statement by a North Carolina contemporary, that it could not recall a single instance where Judge Simonton of the United States District Court had decided against a corporation applying to him for relief, the Raleigh Morning Post asks whether a critic can recall a single instance where a judge has decided a case contrary to the law, the facts and justice, and administers a dignified rebuke, "In view of the well-recognized fact that corporations have been made special objects of oppression and attack in every manner by irrepressible demagogues," by asking: "Has not a corporation as much right to have its rights not only looked into but protected by the courts as any other citizen?"

The question of the Post condenses into a few words a whole sermon which should be pondered long and seriously by men of sane minds. It is useless to direct to it the attention of unreason, except for the purpose of suggesting that an attack on the administration of justice, because of animosity against particular interests, tends to weaken the respect for justice in the abstract, and must lead ultimately, if persisted in, to a chaos in which the individual will suffer more than the corporation.

Success in Publicity.

The Arkansas Gazette, which for some time has made a manful fight for increased railroad facilities for Little Rock, does not limit its vigorous efforts to furthering transportation facilities alone. It knows as well as anybody else the magnificent resources of its State still awaiting full development, and loses no opportunity to suggest a means for their full development. One of its latest suggestions is based upon recent correspondence in the Manufacturers' Record, setting forth the facts about the textile industry at Manchester, England, which uses material brought thousands of miles, inferior fuel transported some distance at considerable cost, and employs labor of extreme ignorance. With these facts as its text, and with a glance at conditions in the Carolinas and Georgia, the Gazette says:

Little Rock and Arkansas offer the best opportunities in the world for the successful and profitable operation of cotton machinery, basing calculations upon the figures above given.

As to water-power, the cheapest and best power yet known for manufacturing purposes is so abundant in North Arkansas that we venture to say that every spindle and loom in Manchester and New England combined could be run without crowding the situation. The propinquity of the raw material, both fuel and fiber, is certainly all that could be desired if steam machinery be preferred.

The lands of Arkansas produce the very

best textile fiber grown in the world for general and many special purposes; the coal along the Choctaw & Memphis road is a thousand years' supply, and we are informed can be delivered in Little Rock for \$1 per ton, and even if \$2 per ton, it is much less than costs the Manchester operators. Besides, the climate offers superior advantages over Manchester or New England for operatives and the wear of machinery.

Based on calculations as above given, Arkansas and Little Rock offer the finest opportunities in the world for the manufacture of cotton, and still the field is unoccupied and so far seems to be unsought.

The enterprising journal looks to increased railroad facilities in the completion of the Choctaw & Memphis and the Arkansas Northern lines as powerful influences to attract capital to the material still lying idle. The condition in Arkansas is duplicated in more than one instance in the South. It is needless to say that the condition will be unchanged as long as it is unknown. It will be changed if energetic men give proper support to the far-seeing exertions of such papers as the Gazette.

Pointers for Merchants.

In a letter to the Manufacturers' Record, Messrs. Merchant & Co. of Philadelphia, manufacturers of babbitt and anti-friction metals, write:

Permit us to congratulate you on the merit of your journal and the pointers it contains for merchants. We have found it possible to secure a great deal of business which would otherwise have been unknown to us through communications addressed to parties named in your columns.

The purpose to remove an industry from a Southern town to Springfield, Mass., is attributed to indifference to the efforts of home people to establish a new line of manufacturing. The industry, it is true, has been on a small scale, but Massachusetts capitalists have shown sufficient interest in it to organize a company with a capital of \$100,000 to develop it. Such an incident is the worst kind of an advertisement for a Southern town.

Southern Farm Magazine.

The Southern Farm Magazine for September contains, in addition to its usual departmental features, a number of special articles of more than usual interest to men engaged in Southern agricultural development. D. A. Tompkins of Charlotte, N. C., advances an argument for a support of cotton-mill building by cotton-growers in "how to make cotton-growing profitable." Other articles deal with the opportunities for Southern farmers for wheat-growing, by Col. J. B. Killebrew of Nashville, Tenn.; the place of cottonseed in agriculture and manufactures, by Edwin Lehman Johnson, now in the Philippines; the relations of farmers and merchants, by J. Pope Brown, president of the Georgia Agricultural Society; the system of diversification, by T. H. Martin of Atlanta; vital points in Southern development, by Major J. F. Hanson of Macon, Ga., and the benefit of round-baling system to farmers, by T. W. Pratt of Huntsville, Ala. Other topics discussed are Southern farmers' supplies, cattle for Cuba, hens as money-makers, stock-raising and immigration, while newsy items give pointers of value to men already in the South, or to those who intend to move there. In the departments of lovers of books, of fresh humor and of household affairs will find much to give profit and pleasure to young and old.

The Southern Farm Magazine is published monthly by the Manufacturers' Record Publishing Co., Baltimore, Md. Price \$1 a year.

SURVEY OF THE WORLD'S IRON TRADE.

A survey of the world's iron trade as given in the following special articles, shows a condition which probably has no parallel—that is, activity and prosperity at the same time in every iron producing country. With the wide sweep of the world's trade into Asia and Africa, the general European and American trade prosperity and the accelerating rate of iron and steel consumption as compared with the growth of population, we find a universal rush of iron business, and a shortage of output as compared with the consumptive demand. Are the conditions favorable for a continuance of this unprecedented situation is a question of world-wide interest. Without attempting a detailed answer a number of special letters bearing directly on this are given. These are followed by the letters from a large number of manufacturers throughout the country touching on the conditions of their individual business. Without a single exception the same story is told of orders far ahead of production, of inability to secure material as rapidly as needed, and of a business sky in which no clouds are visible. Never before, since the Manufacturers' Record was established, eighteen years ago, have we been able to publish so many letters from all sections without a single discordant note in the song of prosperity.

THE SITUATION IN THE WORLD'S IRON TRADE.

By J. Stephen Jeans, Secretary of the British Iron Trade Association.

The question of the hour in the mechanical industries of both Europe and the United States is that of how far the existing supply of pig iron is equal to the demand, and whether, if the supply should overtake the demand, any material reduction of present prices is to be apprehended. I specifically name pig iron, because it is in reference to that commodity alone that any anxiety has been expressed. A sufficient supply of pig iron implies an adequate supply of ores, of coke and of all the raw material of the finished trades. There is no need to follow the pig iron into its ultimate consumption, because it is not disputed that there is, both in Europe and in America, more than enough forge and mill power to produce all the finished material that may be required. In the United States there must be sufficient Bessemer and open-hearth plant now available to produce quite 12,000,000 tons of steel a year if it should be called for, and if all the resources of conversion available in Great Britain were to be utilized, instead of the 4,566,000 tons of steel produced last year, that output could at least be increased by 50 per cent. As for the Continent of Europe, it is perhaps not generally noted that Germany now produces more finished steel than all the other countries put together, her total steel output in 1898 having been 5,734,000 tons, against about 470,000 tons turned out by the other States of Continental Europe, and it is well known that her steel-manufacturing plant is equal to a much larger output even than this. The same observation is equally true of the steel-making plants of Austria, Hungary, Belgium, France and Russia, in all of which countries there has been a notable increase of the resources of production within the last few years.

It is pig iron, and pig iron alone, that therefore controls the industrial situation, and the demand for pig iron continues to be as urgent and as universal as it was a few months ago, when it was apprehended in both Europe and America that a pig-iron famine was imminent. At that time uncertainty existed on two points—the first as to the possible limits of the demand, and the second as to the extent to which the supply would be likely to respond to those limits without panic conditions. Both questions have to a large extent been answered by statistics which have been published within

the last week or ten days. It has now been ascertained that the total output of pig iron in the first half of 1899 by the three chief iron-making countries of the world, the United States, the United Kingdom and Germany, has been considerably less than was generally anticipated. The total output of pig for that period has only been about 15,000,000 tons—exactly 14,991,908 tons—which is an increase of 1,222,000 tons on the output of the corresponding period of 1898. Of this increased output the United States has contributed 420,000 tons, Germany about 370,000 tons and the United Kingdom rather over 300,000 tons. All three countries, therefore, show advances, but by no means to the extent which the exigencies of the demand have called for. It is to be presumed, however, that there has not been sufficient elasticity about the trade to respond more fully to that demand. This is certainly true of both the United Kingdom and Germany, which are absolutely handicapped by an actual scarcity of coke and a relative scarcity of iron ores. Will other countries to any extent show a different result? It is hardly likely that they will. All of them are likely to show an advance, and some of them expect to produce a good deal more pig iron in the second half of the year than they were able to do in the first six months. But the principal minor countries—France, Austria, Hungary, Belgium and Russia—do not collectively produce more than 6,500,000 tons of pig annually, and it is hardly likely that they will have exceeded that rate of output in the first half of 1899 by more than 250,000 tons, or at the rate of, say, 500,000 tons a year. On the other hand, we have every reason to expect a large output all around in the second half of 1899. The United States in this connection must be the predominant partner. Some authorities have anticipated that the total American make for 1899 will be in the neighborhood of 14,000,000 tons. In order to do this American blast furnaces must make 7,711,000 tons in the second half of the year, or 1,422,000 tons more than they produced in the first half. It is hardly likely now that this result will be accomplished, although it is computed that the output for the current period will be materially larger. In the United Kingdom the total number of blast furnaces at work at the end of June was two under the number in blast at the end of

March, and only five more than the number in operation at the end of last year. On the other hand, there are twenty-five new furnaces being built, some of them old furnaces being reconstructed, and each furnace should give an average annual output of 30,000 tons, so that the capacity of the whole should be about 720,000 tons additional to the present output. In Germany, France, Belgium, Austria, Hungary and Russia there are altogether about fifty furnaces being newly built or reconstructed. Some of these, such as the new furnaces of the Alpine Montan Gesellschaft, in Austria, and the new plant of Messrs. Vogel & Noot, near Trieste, will have an exceptionally large output, and in the South of Russia some considerable plants are being put down. But in most of these cases new means of production are not rapidly brought into operation, so that it would not be safe to count upon the majority of these furnaces until well into next year. Their total joint capacity of output may be about 1,500,000 tons a year, which, added to the existing capacity, would guarantee from Continental Europe, apart, of course, from Great Britain, a total capacity of 16,500,000 tons of pig a year, and this, added to the present and proximate resources of Great Britain, would bring up the aggregate European capacity to about 26,000,000 tons which should be available within the next eighteen months at the farthest, and perhaps largely within the next six months.

Of the resources for the production of pig iron, as of those for the production of finished material, there would, therefore, seem to be little cause for apprehension. But how about the raw materials? I observe that my friend, Mr. Swank, in a recent issue of the Bulletin, expresses the belief that in the United States there is little or no likelihood of an iron-ore scarcity. In Europe, on the contrary, there is a general disposition to anticipate such a scarcity. It is true that the iron-ore imports into Great Britain and Germany have been greater in the first half of 1899 than during the previous six months, and it may be that there will be a further increase in the second six months, but this has only been secured by the most vigorous and persistent overhauling of all the possible sources of supply. The present price of Spanish iron ore in Great Britain is about 18s. per ton delivered, which is about 6s. per ton in excess of the average or normal price. Home ores have proportionately increased in price. Cumberland hematite ore is now up to 20s. per ton for the highest qualities, and even at that price orders have been

placed with avidity. Indeed, some American buyers have sought to place a contract with the Hobbarrow Iron Co. at rather more than 20s. per ton, which, however, had to be declined because there was no ore free for sale. All this means, of course, that there has been an increase in the cost of iron ore equal to about 12s. per ton on the ton of pig. In the cost of coke there has been an even more serious advance. Ordinarily, Durham coke costs 11s. to 12s. at the furnaces in Cleveland, which corresponds to about 9s. or 10s. at the collieries. Today Durham coke is costing 22s. per ton at the blast furnaces of Tusside, which is fully 10s. per ton over the usual and normal figure. If to these items we add 4s. per ton as additional cost for labor, stones, repairs and incidental expenses, it will be noted that in this country, at least, the pig-iron maker who has to go into the open market and buy everything he requires at current prices is not so well off as he was a year or eighteen months ago, when raw material had not advanced to a serious degree. Indeed, if we deduct this 26s. of additional cost from the present price of Scotch and Middlesboro warrants, the pig-iron maker so placed is materially worse off. It should, however, be added that a number of the principal firms have their own iron-ore mines, collieries and coking plants, and that in such cases much more favorable results can be relied on.

On the Continent of Europe there is as much pressure being put on supplies of raw material as in Great Britain. Germany is the country most typical of continental conditions generally. There the supplies of iron ore are chiefly got from Luxembourg and Lorraine, where the current value of iron ore has nearly doubled. That, however, does not mean such a great deal, because the ore is ordinarily very low-priced—2s. to 3s. per ton at the mines. A rise of even 100 per cent. would therefore only represent at the most about 6s. on the ton of pig. The average cost of transport to works from mines is about 8s. per ton for the Westphalian district, which is the German Pennsylvania. Of course, in imports of hematite ore from Spain or Sweden, German blast-furnace owners are on the same footing as those of Great Britain, and have to pay 6s. to 7s. per ton more than the normal rates of three or four years ago. For some time past, however, German pig-iron makers have had the advantage of cheaper coke than their British compeers, despite the fact that both production and prices are regulated by a syndicate, whereas in England the prices are free. It is now proposed to add 4s. per ton to the price of coke, which will bring it up to about the English level. This has led to a further advance of prices for pig and finished material, coupled, of course, with the pressure on manufacturers all along the line. German prices, which are again typical of continental rates generally, are often 20 to 25 per cent. higher than British prices of today (having regard, of course, to the drop in the latter within the last few days), and are in some cases almost identical with those now quoted in the United States. The German demand for steel plates is so urgent that they are being quoted at nearly £2 per ton more at German than at British works, and so with other descriptions of finished material.

This necessarily cursory and imperfect account of the iron-trade situation in Europe may possibly afford to American manufacturers some useful hints as to how "the land lies," and is likely to lie, in relation to their own business, and its outlook in foreign markets. Some months ago a paper was read before the Institu-

tion of Civil Engineers—the leading engineering body in Europe—on the Lake Superior iron-ore mines and their influence upon the production of iron and steel. In that paper the authors, Messrs. Jeremiah and A. P. Head, showed that the cost price of a ton of Bessemer pig iron at the beginning of the present year was 32s. 5½d. in Pittsburg and 52s. 2d. in Middlesborough (England). In other words, there appeared to be a difference against England of nearly 20s. per ton. In this computation the cost of the American coke was taken at 7s., and of the English coke at 15s. 6d. per ton, while the American ore was taken at 12s. 8d., against 15s. 2d. for Spanish or west coast hematite in England. Of course, these prices no longer prevail, but they are probably typical of the differences that may be expected in normal times.

At the moment of writing I should be disposed to place the cost of manufacturing hematite iron in the three principal centers of the trade—West Cumberland for England, Pittsburg for the United States and Westphalia for Germany—at the following approximate figures:

	England.	Pittsburg.	W'phalia.
Iron ore.....	£1 14 0	£1 5 0	£1 15 6
Coke	1 2 6	0 7 6	1 0 0
Limestone ..	0 2 0	0 1 11	0 2 0
Labor	0 3 6	0 2 6	0 3 0
Repairs	0 1 6	0 1 6	0 1 6
Other costs...	0 1 0	0 1 0	0 1 0
Totals	£3 4 6	£1 19 5	£3 3 0

These figures will, of course, vary according to the situation and circumstances of the works, and in a large number of cases the cost will be much less where manufacturers have their own supplies of material. It is probable that in the United States, where events move rapidly, the average market quotations would give higher figures than those here quoted, but whatever those figures may be, they are not likely to be high enough to create any apprehension on the part of American makers that their own markets are in danger from outside competition. It is true that some orders for plates and other products have lately been placed on this side for American consumers, but in Europe we have at present enough to do in attending to our own business, and high as American prices now are, they will not, in my opinion, invite any material competition from outside countries for at any rate some months to come, and not at all so long as the existing relative range of values and costs is maintained. In short, the American market is assured to American makers, so that if present prices are not maintained in the United States it will not be because of anything that Europe is likely to do, or, indeed, can do, to the contrary.

In all this, as it seems to me, there is very much hope and encouragement for the South. No district in Europe, nor indeed anywhere else, that I know of, can make iron on a large scale so cheaply. In Europe the tendency is to increase the cost of making iron. In the Southern States the tendency is in the opposite direction. Luxembourg is the only district in Europe in which pig can be made on a relatively cheap scale, and Luxembourg foundry iron is today at 77s. per ton. I do not think this price can be maintained over a very long period, but so long as it exists, Alabama, West Virginia and Tennessee should reap a golden harvest if they make the most of their opportunities.

The Sloss-Sheffield Steel & Iron Co., a reorganization of the Sloss Iron & Steel Co., and a consolidation of six important iron and furnace properties in North Alabama, details of which have been published in the Manufacturers' Record, has been incorporated in New Jersey.

CONTINENTAL ORE DEPOSITS.

British Ironmasters Interested in Recent Discoveries.

[Staff Cor. Manufacturers' Record.]

London, England, August 5.

The actual condition of the British iron and steel trade presents a number of interesting questions, and will admit of considerable study before the facts can be ascertained. Investigation in Birmingham and Sheffield led me to make further inquiries here before drawing any conclusions, for London is naturally the center of many of the most eminent authorities on the subject.

Several questions of special importance to American metal producers are the prospect of increased shipments of pig iron, the future market for tool steel and rails, as well as the outlook for American makers of structural steel in the European market. It is very difficult to ascertain the exact cost of manufacturing pig iron in Great Britain on account of the varying distances of the raw material from the furnaces and the various modes of securing the supplies. A curious fact in this connection to be considered is that the British policy is not usually defined as in the States by the laws of supply and demand. The English or Welsh producer has been in the habit of fixing his price at a certain figure which will yield him a fair profit. If the market advances above it he realizes so much more. If prices go below his figure he stores his product and quietly awaits an advance, even if it does not come for a year or several years. This has been the custom, the feeling being opposed to the American principle of "quick sales," even though at small profits. But a change is taking place. The steadily-increasing competition from Germany, as well as America, is compelling Great Britain's producers to depart from the old lines, and they are beginning to realize that "half a loaf" is better than none at all. Of course, they do not consider that the quantity of pig iron thus far imported would have any effect on the market in itself, but some admit that if the States can ship iron here at figures quoted and make a profit, such companies as the Tennessee Coal, Iron & Railroad and the Sloss Iron & Steel must be considered as powerful rivals during dull periods when the production largely exceeds actual consumption. During the present activity, however, the British ironmasters have so much to do in filling orders that they are not concerned over American or other rivalry. There is plenty of room for all.

As to steel rails, the matter is different. The British are amazed at the prices reported as quoted in the contracts secured by the Carnegie, the Illinois and the Maryland steel companies from Russia, and even in this country. Of course, the rail makers are non-committal, but good authorities assure me that the outlook for American rails is excellent if the recent prices can be maintained at a profit. In the Middlesboro and Barrow-in-Furness districts, where a large proportion of British rails are turned out, most of the companies have been keeping their annual reports from the public, which usually means, in this country, that business is not as good as it might be. One concern, making tram and other light weights, seems to be on a successful basis, and of late has declared a dividend of 10 per cent. I understand that the rail mills have not kept pace with the cotton and other industries in point of new equipment, and that American companies are much superior in most cases in equipment.

The question of a supply of suitable iron ore is also bothering British producers, who have been dependent to a

certain extent on the Spanish supply. The statement that the deposits of ore in Spain are rapidly failing I have confirmed on excellent authority. In quantity they are very extensive, and would perhaps last a century or more, but analyses show that the quality has greatly deteriorated, and that the percentage of phosphorus and other impurities in the recent output is much greater than heretofore. Indeed, some companies have already abandoned the use of these ores, and are looking elsewhere. Right here I might say that ore-beds in Northern Europe are attracting much attention from the British iron producers. The excellent quality of Swedish iron has been known for many years on both sides of the Atlantic. Makers of high-grade steel, such as the Jessops of Sheffield, use many thousands of tons annually. The idea of bringing magnetite ore in its crude state to the furnaces by the shipload is of comparative recent origin. What are known as the Gellivare mines are now being worked to such an extent that 3000 tons daily are being extracted. Most of the ore goes to Lulea harbor, on the Swedish coast, where it is placed on shipboard. It is of a very high grade, much of it containing from 65 to 70 per cent. of pure iron, with but a trace of phosphorus (one-tenth to one-half per cent.) The Gellivare deposits cover an area of about three by two miles.

Other deposits of excellent grade ore have been discovered also in the same section at Kiirunavaara and Luossavaara. They are about 110 miles from the nearest seaport, and a railway is being constructed to the district from Victoria harbor, on the Norwegian coast. These ores are considered inexhaustible in extent, and it is calculated 1,200,000 tons of ore can be shipped from there annually with the railroad completed. This will require four years, however, at a cost of \$7,500,000.

But great physical difficulties lie in the way of securing the ore in large quantities. The long winters cause most of the harbors to become icebound for several months in a year, while the high tides on this coast would compel a very costly system of protected docks, as the rise and fall at times is as much as twenty feet. I also understand that the Swedish government is somewhat concerned over the railroad, as it is feared Russia will cause international complications in order to seize it and gain a seaport on this coast. To sum it all up, there is no question about the extent and quality of these ores, but the question is how to get them at a low price.

The use of American machinery, from typewriters to locomotives, has become an old story in Great Britain. As you ride through the streets of the larger communities you will see vans hauling huge boxes sent from American factories to their agencies or to fill orders. Yet I was somewhat surprised to see American metal planers and power drills being set up by the side of some of the finest foreign-made equipment at Sheffield recently. They were in the works of Messrs. Vickers' Sons & Maxim, the noted manufacturers of ordnance, armor-plate, shafting and marine work. This concern obtains the very best equipment, regardless of price, for such machinery is absolutely required in filling the contracts it has on hand from various governments. In the shops several pieces of machinery were being set up which were made by the Niles Tool Works of Ohio and the Pond Company of Plainfield, New Jersey.

But one of the most significant indications of the favor shown American goods in Great Britain is the decision of the Westinghouse Company to establish

works at Manchester. The London manager confirms this statement, and in a recent interview with me stated that preparations had been made to build on forty acres, all of which would be utilized, while as much more land had been secured for enlargements if necessary. At these works, which will be among the largest, if not the largest, of their kind in Great Britain, all kinds of electric apparatus will be manufactured, from incandescent lamps to dynamos, for electric-power application. About 1500 horse-power will be utilized, and when in full operation fully 4000 hands will be employed. The site is one of the best which could be secured for the purpose. It is in Trafford Park district, adjacent to the ship canal and between Manchester and Salford, in the heart of the industrial section. The company will have several rail lines, as well as the canal, for transportation facilities, giving it the advantage of competitive rates of transportation. I understand that work is to begin at once, with the view of completing the plant as early as possible. It is modeled after the Pittsburg plans, and much of it will be a duplicate, both in size of buildings and character of machinery.

It is stated that this is by far the most important American manufacturing enterprise thus far planned in Great Britain. It is attracting much interest, and has, of course, been discussed at length. Some are of the opinion that it will be a good thing to arouse British manufacturers to the importance of American competition, and that it will stimulate them to improve their plants and broaden their foreign market, while it means the investment of so much more foreign capital in Great Britain. Others treat it as an "invasion" of home territory, but I can say that these are few in number, for the fact is that there is a very strong feeling here of liberality towards Americans and American products. I have heard this remarked by other visitors from the States.

As I noted in another letter, Manchester should be one of the best markets for the sale of electrical apparatus. There is a broad field in the cotton-manufacturing section, where electric-power for operating machinery is to be found nowhere. The city and suburbs contain over fifty miles of tramroad of which less than ten are electric. The corporation has determined to control the street-railway systems, as it does the water and illumination plants, and will convert all the lines to electric. Here is fully \$3,000,000 worth of construction alone, not including rolling stock. The city has also determined to have several immense stations, aggregating 100,000 horse-power, and its engineers are completing the plans. The foresight and enterprise of the Westinghouse people are therefore apparent, and plainly so, for they will be "on the spot." D. ALLEN WILLEY.

AT HIGH-WATER MARK.

Iron and Steel Prices Viewed by the Editor of the Age of Steel.

In a letter to the Manufacturers' Record Mr. W. E. Barns, editor of the Age of Steel of St. Louis, Mo., writes:

"Prices of iron and steel have, in my opinion, about reached high-water mark. The forces of moderate reaction are present in the extraordinary production of the mills and furnaces, the declining tendency of iron and steel exports, and in the greatly lessened takings of pig iron from free stocks. These facts are significant, although as yet inoperative as against what might be called 'market momentum.'"

"Prices will go through the year in

about the present level, perhaps slightly advancing, especially in some lines, under the stimulus of early fall trade and by reason of a continuing scarcity of immediately available supplies. But such gains as are made under these conditions will probably be lost in easier markets towards the close of the year.

"For the first quarter of 1900 the situation will be comparatively steady, with prices close around December figures and mills and furnaces working strong on old orders. Much new business, however, will be held off then, and probably to a later time, pending the settlement of ore prices and for other reasons. Broadly speaking, though, the outlook for both the first and second quarter of next year is very favorable to a highly sustained degree of prosperity, although prices may be expected to be somewhat more favorable than at present to buyers covering forward wants.

"No disaster threatens the iron trade, however. To my mind the iron and steel manufacturers have an era of long-sustained and profitable activity before them. Foreign markets will afford an ample outlet for surplus production, and thus contribute to a stability which has hitherto been lacking in prices."

DEMAND NOT FORESEEN.

Mr. A. I. Findley, Editor of the Iron Trade Review, on the Outlook.

Discussing the outlook for iron Mr. Alvin I. Findley, editor of the Iron Trade Review of Cleveland, Ohio, writes to the Manufacturers' Record as follows:

"No one connected with the iron trade foresaw any such demand as has been carrying up prices so rapidly since the beginning of the year. No one connected with the trade would have believed such prices and such demand possible within so short a time. It is wisdom, in view of what has taken place, to venture little as to the duration of this unparalleled prosperity, or as to the course of demand and prices in the months just ahead.

"It is true, broadly speaking, that the furnaces, rolling mills and steel works of the country have substantially their entire production for 1899 sold today. Only here and there can a blast furnace take an additional order for delivery before January 1. Some have 75 per cent. of their estimated production between January 1 and July 1, 1900, sold; others 50 per cent.; nearly all a considerable amount for shipment in 1900. It is certain that much iron sold for delivery this year cannot be delivered until the early months of 1900, for many furnaces are now behind on deliveries and will not catch up this year. Coming to finished material, plate mills, structural mills and bar mills are sold up for 1899, with the exception of a few bar mills that can still take December business. Large orders for finished material for delivery next year are already booked at close of today's prices. But these prices are now so high that the iron trade is watching narrowly for signs of curtailment. Nothing pronounced in this direction has appeared.

"Some building enterprises may have been laid aside to wait for lower prices; but the mills will not find this out for months. The ultimate buyer of hardware has been feeling the effect of advancing prices for months, but having a good wage wherewith to pay, has paid the price. What the farmer will do about the great advance in the price of implements will not be known until next year; but manufacturers are preparing for a somewhat smaller output in the next twelve months. There are reported to be considerable stocks of implements in the hands of dealers, who bought heavily

in anticipation of the large advances. These are to be considered in estimating the demand for another year. Railroads bought liberally of rails at the low prices of eight months ago, and some of them have provided for their needs for months to come. But even so, the unprecedented earnings have given many roads the ability to make extensions and replacements, long postponed, and surplus will go into these rather than into enlarged dividends. Very heavy purchases of cars and locomotives must be made in view of rolling-stock shortages, and the iron trade can look for large tonnages on this account.

BOUND TO IRON AND STEEL.

Unwonted Activity in Many Lines of Industry In All Sections.

Illustrating to a remarkable degree the activity in iron and steel, and at the same time accounting for it to a large degree, is the remarkable vigor displayed in all sections by industries connected more or less with the metal trades. In response to inquiries on the subject the Manufacturers' Record has received from its advertisers, who are among the best indices of trade conditions in the country, reports full of enthusiasm, and full, too, of evidences of unwonted vigor in their respective lines and of solid promises of continued prosperity.

Scanning the letters one is particularly struck with the great increase in orders for agricultural machinery, electric supplies, gas plants, flour-mill machinery, grinding mills of all kinds, belting, wood-working machinery, foundry supplies, telephone outfits, plumbers' supplies and particular or general equipments into the manufacture of which iron enters or with which it is connected. In many cases these orders, already advanced from 25 to 100 per cent., are far beyond the means of immediate delivery, but such confidence is had in the future that they have been accepted, while firms are making strenuous efforts to hasten the supplies of material for manufacturing purposes. Many firms have been compelled to work night and day, to double their force, or to do both, one gentleman describing the situation in his establishment as "the force doubled, the output doubled and the working hours doubled." Others have bought stock ahead, some keeping their works clear of finished goods, so great is the demand for them, and some waiting impatiently for material with which they may be enabled to meet orders. The American market is in many instances so active that manufacturers have their hands full to meet the exigencies, while others find time to extend their position abroad.

It may be interesting to quote a few typical phrases from the letters. They are, "capacity of works absorbed in present orders," "orders being turned away," "work refused sufficient to run the works for three months," "overrun with orders," "increased price of raw material and labor," "congested with orders," "supplying two markets," "much foresight required to meet orders," "the entire force working in the evening or a double force to keep work going twenty-four hours" and "iron and steel mills weeks and months behind in deliveries of specifications." A St. Louis firm banks its prediction of even better business upon the immense crops of the West, while another in the East thinks that unless farmers secure better prices for their products they cannot keep up with the increased prices of implements, due to the advance in the price of iron and steel.

"But apart from any of these minutiae, a broad view of the prospects for the iron trade can scarcely be otherwise than optimistic. The world's needs in iron and steel have expanded marvelously in the past two years, and seem still to be expanding. With exports in the last fiscal year representing the equivalent of more than 1,250,000 tons of pig iron, we have made only a beginning in the foreign trade, and the probability of an output above 14,000,000 tons in 1900 may be regarded without fear of material recession in prices, if any, in view of the splendid present buying capacity of the 75,000,000 at home."

These letters tell that mechanics and other classes of employees are kept hard at it in increasing numbers, shown also by a livening up of housebuilding operations. From the standpoint of the correspondents of the Manufacturers' Record the outlook is serene, the only possible drawback being expressed by one or two gentlemen in timidity at the approach of a general political campaign. But the political campaign is now on, and it is safely grounded in the record of busy mills and factories, employment seeking men instead of the reverse, and an optimistic spirit permeating the whole body politic, as the following letters indicate:

Accumulated Capital to Go Into Buildings.

N. O. Nelson Manufacturing Co., St. Louis, Mo.: "The condition of trade in goods of our class that enter into permanent construction is better than we have known it in the entire period of twenty-eight years of our connection with this line. Our sales this year are 65 per cent. ahead of last year, and almost 100 per cent. above 1897. By putting on all the additional force possible in our factories and adding somewhat to their capacity, we have been able to keep tolerably well up with orders, rarely being as much as a month behind. The raw material and goods that we buy have been subjected to great delays. Some manufacturers are several months behind. We are carrying about twice the stock of raw material and finished product that we have carried the last few years. This means that in most goods we are in position to fill orders promptly. We look for continued activity for several years. The country has just begun putting its accumulated capital into structures. The profits of the country the present year will be large, and will go largely into houses, factories and railroads. A good portion of the present year's rush has been to fill up stocks. Next year and for some time thereafter it will be for actual consumption, and will be larger than the present year. Some prices that have been greatly advanced will settle down, but in the main the prices will continue about as they now are for a couple of years. We are very slightly concerned in the foreign countries, except Mexico, where the trade continues good, as indeed it has been in the past."

Carrying Good Stocks.

A. T. Throop, secretary Dobbie Foundry & Machine Co., Niagara Falls, N. Y.: "We beg to express to you our satisfaction with the condition of trade as indicated by the orders which we have filed during the current year. We are doing more work this year than during any previous year since our business has

been established here, but manage to keep pretty close up to our orders, although in some cases our capacity has not proved adequate to properly take care of the business which has come to us. We are carrying good stocks of raw material, but very small stocks of finished product. We find the foreign market continually calling for more of our goods, and our orders for export thus far this year have exceeded in value the whole amount of like orders received in any previous year. The local demand for our goods is somewhat variable, but orders for shipment are constantly increasing, and from this fact we anticipate continued activity, and consider that prospects for good trade in the future are very promising."

Shortage in Mechanics.

Excelsior Knitting Machine Manufacturing Co., Allentown, Pa.: "The condition of trade is such that it has compelled us to run overtime, and have been compelled to do so for the last six months. In comparing the activity of the trade of former years with that of this period, we find that our orders have never been so far ahead of our production. In regard to the carrying of much raw material and finished product, it is far below former years, as in the first place we are unable to get our orders filled in full for the raw material, even after having orders placed two or three months in advance, and thereby are unable to get any finished product on hand; second, we are unable to get the mechanics for our class of work, due to the fact that in this section of country everything is booming. At the same time we were compelled to make an advance of 20 per cent. on the wages. So from the present outlook and the general report from all the hosiery manufacturers, we look forward for a continued activity and prosperity. In regard to foreign trade, we have quite a number of inquiries, but under the said above conditions mentioned we are, of course, unable to extend our trade to foreign countries."

In New Territory.

A. H. Barber Manufacturing Co., Chicago, Ill.: "The sale of refrigerating and ice-making machines thus far during the year 1899 has greatly exceeded that of any former years; our sales in number of machines sold show an increase of fully 25 per cent. Orders were coming in faster than they could be filled up to July 1; since that date and at the present time work on ice and refrigerating plants has been done promptly. The amount of stock, that is, raw material, on hand July 1 was less than one year ago. The high price of pipe and iron and all material used to construct ice and refrigerating plants keep manufacturers from buying only what is needed for immediate use, and therefore the stock of raw material is without doubt materially less today than one year ago. The outlook for the future is certainly better than in previous years at this date, and the additional territory secured by the United States is a vast field for ice and refrigerating machines. We look for great activity in these islands in this line of work. The inquiry for small machines in foreign countries has increased very largely in the past eight months."

Up to Capacity.

A. L. McKaig, treasurer and manager Pittsburg Meter Co., East Pittsburg, Pa.: "Our business consists in the manufacture of gas meters and water meters, and while the gas-meter business is not much better than last year, the water-meter business is very active, and we are not able to get ahead of our orders, and that we are working up to our capacity, and that the demand for water

meters is better than it has been for five years. We are carrying a much larger stock of raw material than ever before, but our stock of finished material is low. From the indications, we look for continued prosperity, as everything points that way. On account of being kept busy supplying home trade, we have not made much effort in foreign markets, although the foreign trade is gradually increasing."

Equal to the Emergency.

William S. Haines, president William S. Haines Co., Philadelphia: "Our orders do not exceed our production, for the reason that the capacity of our factory is capable of expansion on a few weeks' notice. As it takes some five months to make a Heintz trap, however, we are obliged to keep a large reserve on hand in order to cope with unforeseen business. This reserve today is smaller than for many years."

In Advance of Last Year.

J. Clements Shafer, secretary and treasurer Sydnor Pump & Well Co., Richmond, Va.: "We have found business in our line very much more active than last year, especially in the artesian-well department. We have a number of contracts ahead, and find the demand is steadily increasing. Our general business is also in advance of the same period of last year."

Fifty Per Cent. Increase.

E. M. Dart, president E. M. Dart Manufacturing Co., Providence, R. I.: "Our business is active, and, compared with the same period last year, we are doing about 50 per cent. more. Our orders are ahead of production, and have been during the whole year. We are making arrangements to increase our business and production to meet the prospective demand, domestic and foreign. We look for a prosperous and active business period that will reach far into the next century. Our stock is below the average in quantity, and we shall try to keep it there by filling orders promptly and creating facilities to meet demands."

Working at Night.

W. D. Dunning, secretary and treasurer Boomer & Boschert Press Co., Syracuse, N. Y.: "The general press business is unusually good, and we are running part of the night and can hardly keep up with our orders. We are shipping a great many large presses, mostly hydraulic, and some of them go abroad."

Export Business Advanced.

James W. Pomeroy, president the Rochester Lamp Co., New York, N. Y.: "We are happy to report an increase in the relative volume of our business, and we further believe that conditions generally are improved and that future trade will be of still greater volume. As to our export business, this has advanced considerably over the amount done last year, and seems to be broadening daily. Of course, we have increased our facilities for sale, having improved our line in size and in a general way, such as having goods which would appeal to the cheapest as well as the medium and more expensive buyers."

Mechanics Kept Busy.

Frank P. Milburn, architect, Charlotte, N. C.: "I have found business in my line very good for 1899, while I do not think it will be as good this year as in 1897 and 1898. I account for it in this way: There are considerable more improvements going on in this section this year than last, but much smaller work—very few large buildings. Mechanics are busy in all lines, and are getting better wages than I have known in the last three years. Heretofore wages were so low in this section that good mechanics

and tradesmen would not come to this section for work, and I hope now we will have a better class of workmen and our people will invest more money in new improvements. Much money is being spent in the South on new buildings each year without considering progressive ideas of construction or pleasing effects in architecture. Our people are now beginning to realize the value of good taste, and at least one-half of our new buildings are being built from architects' plans. Heretofore the carpenter was the designer."

Elections a Bugbear.

A. N. Spencer, Hyde Brothers & Co., Pittsburg, Pa.: "The degree of activity of trade is the greatest we have known in the last seven or eight years. We are carrying about 50 per cent. larger supply of both raw material and finished product than ever before. At the present time we are inclined to go very carefully, although we look for continued activity for at least six more months, but fear that history will repeat itself in the disturbance to trade caused by the approaching election. The prospects ought to be favorable for a long continuance of active business, but unfortunately, political affairs in this country are so arranged that we can never feel assured that well enough will be let alone. We do no foreign business, but have no doubt that the activity on the other side has indirectly helped matters over here to a very large extent."

Sales More Than Doubled.

Salem M. Hardy, manager the Hardy Lamp Co., Pittsfield, Mass.: "We are pleased to advise that our sales of the 'Hardy' incandescent lamp for the present year have been a little over double our sales for the same period last year. On account of the close prices prevailing, however, we do not carry the stock of raw material and finished product that we have in former years. We believe this condition prevails throughout all our industry. The finished product in our line is now sold up more closely than ever before. From present outlook the consumption of incandescent lamps will be much greater the coming winter than in any other previous year."

Advice of the Poet.

J. E. Rhoads & Sons, oak-tanned leather belting, etc., Philadelphia, Pa.: "Our business for this year shows a decided increase in volume over that of '98, the sales for last month being over 50 per cent. larger. Prospects for fall business seem to us better than for a number of years past. Our aggregate supply of material, manufactured and unmanufactured, is probably decidedly larger than a year ago. As to the continued activity, we feel that it might be wise to take the advice of the poet: 'Do not ever prophesy unless you know.' But great activity is not, in our opinion, usually conducive to long-continued prosperity. Our business has been principally confined to domestic trade, although we have done far more export than usual since the first of the year."

Activity in Lynchburg Greater than for Twenty Years.

John Stewart Walker, Lynchburg, Va.: "I am pleased to say that during my business experience of twenty years in Lynchburg I have never known of as much building going on, and nearly all of it of the most substantial kind. At present there is under construction and contracted for \$300,000 worth of building for new manufacturing plants alone, and every able-bodied man who wants work can get it. The demand for houses was never so great, and the number of vacant ones is very small. We have more inquiries for timber, mineral and coal

lands than we can supply, and whereas a year ago it was hard to interest investors in such properties at any price, today we have no trouble whatever in placing them and all kinds of first-class investments at good prices. Crops are good, business is good, and the general outlook was never better. Northern and foreign investors are just commencing to wake up to the importance of undeveloped resources and the business advantages for manufacturing purposes offered by the South. The three great trunk lines, namely, the Southern, Norfolk & Western and Chesapeake & Ohio, which intersect at this point, now realize the importance of Lynchburg and are helping us every way possible to build up the town and locate new enterprises."

Shops Overcrowded.

Fred B. Vail, Clayton Air Compressor Works, New York: "Our shops are overcrowded with work. This is due, of course, to a certain extent, to prevailing conditions that exist in the machinery trade. However, our line is somewhat of a specialty, and we are led to believe that this condition is partly due to the particular merits of our goods. We do a large export business, having orders on our books at the present time for England, Scotland, Belgium, France, Russia and Germany; in fact, we are exporting machinery to all of the leading manufacturing countries of the world. We are unable to carry as much raw material and finished products as usual, owing to the fact that it is impossible for us to devote any time to the manufacture of stock, and it is only through the utmost diligence that we are able to secure sufficient raw material to fill our immediate needs. The uses of compressed air have so greatly widened in the past few years that we look to a future of continued activity."

Increase of Orders.

D. N. Camp, president the Skinner Chuck Co., New Britain, Conn.: "We find business more active than it has been for several years with us, and as manifested both by increase of orders and general movement in all departments of the hardware business in this vicinity. We are carrying a good supply of raw material and finished goods, though at times the amount of orders diminishes the product temporarily that we have on hand. We believe the prospect for continued activity and prosperity in our line of business is good. Our foreign trade is increasing with the general increase in the demand for American goods in foreign markets."

Brisk in Electricity.

Geo. A. Tower, vice-president Tower-Binford Electric & Manufacturing Co., Richmond, Va.: "The electrical business is more brisk than it has been in a number of years. This is not only in favored localities, but is a general activity, as is evidenced in the difficulty in obtaining manufactured articles. The outlook is even brighter than the reality of today, and the prospect for a busy fall and winter is very gratifying after the long season of 'dull times.'"

Conditions Are Healthy.

U. S. Mineral Wool Co., New York City: "We have noticed a marked improvement for the last few months in the volume of business, although we have not experienced to any extent an improvement in prices, as our goods are subject to abnormal conditions due to competition. We find it necessary to carry a larger stock of raw materials than heretofore, and although we have been working full time, have not increased our stock of finished product perceptibly, as the outgo demand has been entirely satisfactory. We have also secured foreign busi-

ness which previously had dropped off, an indication to us that although foreign manufacturers have advanced their prices, their stock is low. We are enabled to compete with them, although handicapped with excessive ocean freight rates. On the whole, we are entirely satisfied with present conditions, which, we think, are of a healthy character, and the prospects are for their remaining satisfactory for some time to come."

Still Making Additions.

Morse Twist Drill & Machine Co., New Bedford, Mass.: "Business during the present year has been much more active than in ordinary times. We have managed by anticipating our orders to keep our stock of steel in good shape. We have also added to our plant, so that we have been enabled to more nearly keep up to our requirements than would otherwise have been the case. We are still making further additions, which will place us in good condition for any further increase in trade. Foreign trade continues good."

Busy for America.

G. W. Drury, Wrought Iron Bridge Co., York, Pa.: "Orders are ahead of production 100 per cent. We cannot handle any foreign orders. Have more at home than we can do."

Have Been Very Busy.

W. D. Dunning, Alexander Iron Works, Syracuse, N. Y.: "In our special line of plaster mixers, as well as our soap-powder mixers, we have been very busy, and as it looks now, the year promises to be a good one."

Ahead of Production.

J. F. Polsey, president Boston Blower Co., Hyde Park, Mass.: "Our company is at present newly organized, and not long in the present location of business, consequently we cannot give you very extended news on the subject about which you inquire. Would state, however, that the present outlook of business is fair. Our stock on hand is decreasing rather than increasing, as orders are coming in in such a way that they are a little ahead of our production. We do not realize the boom or wonderful increase that some of our neighbors and competitors seem to experience. The outlook, as stated above, is fair. In regard to foreign business, would state that we do very little outside of the New England and Middle States. Occasionally we are called upon to fill an order for export."

This Business New.

Frank W. Morse, treasurer the Incandescent Electric Light Manipulator Co., Boston, Mass.: "As our business is not only new to us, but also as a business itself, having only been established a few months, we have no way of comparing it with other years. If we are to judge of the prospects of our business for the coming fall and winter by the hundreds of inquiries we have received from not only all over the United States and Canada, but also from South America, Europe, Asia and even Australia and New Zealand, then we shall certainly have a big call for our manipulator and cleaner. As we bought a large stock of raw material last spring, before prices advanced much, and as we have utilized the dull summer months in making up a large stock of parts of our machines, we shall be fully prepared to handle all orders with dispatch, as (making up all goods to order only) we shall only have to assemble the parts together on receipt of same. We felt when we started into this business that we had a good thing; now we feel assured of it, and we want everyone using incandescent electric lamps to hear of our manipulator and cleaner and learn what it will do and save."

Far Better Trade than Since 1892.

J. A. Gowdey & Son, manufacturers of reeds and harness, Providence, R. I.: "Our trade is at present far better for July and August than it has been since 1892, and our orders are about a month ahead of our production, and we are looking forward for a very good fall and winter trade. The foreign trade in our line is somewhat limited; it averages about the same from year to year."

The Outlook Bright.

N. R. Guilbert, secretary and treasurer the Albro-Clem Elevator Co., Philadelphia, Pa.: "Trade is very good, and we think the outlook for future trade is very bright."

Prices Still Advancing.

H. P. Boyd, secretary and treasurer the National Building Supply Co., Baltimore, Md.: "1899 has shown a very decided increase in our business over previous years. For three months past we have been unable to supply the demand except subject to delays in many instances of from two to four weeks. We have every reason to expect continued activity, and really look for an increase next season. Our foreign trade is all importing, and we find the factories there equally crowded with orders, and prices advancing."

High Prices of Steel Forced Use of Wood.

Thomas Robins, Jr., president Robins Conveying Belt Co., New York City: "Of late our sales each month have been larger than the month preceding, and there are enough orders on our books to keep us busy for several months. We have been obliged to put in new tools and to run our shop twenty-four hours a day in order to keep up with the demands. We have had considerable difficulty in securing sufficient raw material, and the high prices of structural steel have made it necessary to use wooden construction in several large jobs where steel construction at ordinary prices would have been preferred. We have but little raw stock on hand, and our stock of finished product was wiped out three months ago, during which time we have been obliged to do business in a 'hand-to-mouth' manner. Our export trade has been fair."

A Banner Year.

W. W. Melvin, sales agent the New Jersey Zinc Co., New York: "With us this year has been the banner one. While we have been and are now running our full capacity (greater than any year before), we are behind all orders forty to forty-five days. The increased demand from all quarters (especially the West) is something unknown in the zinc business, with no signs of a let-up. We are bare of stock; cannot produce fast enough. We certainly look for continued activity in all general manufactures. We noticed it in our lines over a year ago and at once commenced building a large central plant in addition to our already four now running to cope with same, which will be in operation by the end of the present year to meet the spring trade, which we look upon as going to be heavy. Our foreign trade has advanced largely, and still on the advance, shipping it to about all ports, both in the United Kingdom and the Continent."

Home and Foreign Trade Greatly Increased.

H. B. Smith Machine Co., woodwork machinery, Smithville, N. J.: "Business started off nicely in 1898, but the slight unpleasantness with our neighbor, Spain, concerning Cuba, interfered with a promising trade, so that 1898 was small. Business commenced looking up about December, 1898, and soon assumed almost a boom; so that the trade of 1899 will be four times that of 1898, and, judg-

ing from inquiries and the usual signs of the times, trade will continue and may increase, for the reason that the sale of woodworking machinery largely depends on general prosperity, which is usually followed by housebuilding. By ordering stock ahead we have no trouble to keep a good supply on hand, but it takes some time to get it. Having largely increased our facilities, we are enabled to fill orders quite promptly, and building so many machines, we have in process of construction a large quantity of machinery, but a little scarce of completed machines. Foreign trade is increasing, and we cultivate it, for the reason it is close cash and the trade is steady or regular. The high prices of materials make it difficult to compete in a foreign market, and any further advance in materials will cause us to lose our foreign trade."

Most Active Trade in Twenty Years.

Wrightsville Hardware Co., Wrightsville, Pa.: "Trade conditions are unprecedented in our experience of twenty years. We can make no comparison with other years, as we are overrun with work, although we have almost doubled our capacity since 1897. We now have orders booked to keep us running steadily for the balance of the year, with no stock of finished goods on hand, nor are we likely to get any this year, as they are shipped as fast as produced. We are fairly well supplied with raw material, and think the danger of an iron famine over, owing to the increased production and of new brands offering, but from present outlook we anticipate no retrogression in prices for a year or more to come. Our export trade has gradually increased for the last three years, about 30 per cent. annually, and is steadily increasing in volume, as well as to countries not heretofore covered. This, however, we attribute to our membership of the Philadelphia Commercial Museum and National Association of Manufacturers, who are making herculean efforts to increase American exports of manufactured products. And we think our membership fee one of our best investments, and would advise other manufacturers of every description to connect themselves with these associations. And while we congratulate the Manufacturers' Record for its noble stand in the interests of the South, we cannot help but praise the above institutions for the noble work they are doing for the whole country."

Beyond Comparison.

Julian Scholl & Co., road-making machinery, New York, N. Y.: "The present business activity is so far ahead of anything in recent years as to be beyond comparison. From the outlook this condition seems bound to prevail for a long time. We note a general tendency to say that it is good for two years, but we are not by any means willing to agree to such limitation. We should judge that the present prosperity, gauged by our own business, and future prospects as they appear to us, would continue for an indefinite period. Foreign trade is brisk, and is only limited, we believe, by the condition you suggest of the home market absorbing most of the output. This, perhaps, is not so marked at present as it was a while back, when our foreign customers were exceedingly chagrined to find their deliveries delayed on account of the home demand. We believe that the mistake has been made in some cases of not giving the foreign market the consideration it deserves, and such discrimination is bound to have an injurious effect abroad. The increasing foreign trade that is now drifting this way should have our most punctilious attention. To hold this trade we must have the confidence of our foreign buyers in

our desire and intention to give their orders equal attention with those of the domestic trade."

Explanation of Activity.

John A. Walker, vice-president and treasurer Joseph Dixon Crucible Co., Jersey City, N. J.: "The condition of trade with us is simply unprecedented, and as compared with former years we are a very handsome percentage ahead. Orders on almost everything we make are a long way ahead of our present ability to produce, and everything disappears from the factory the moment it is made. We see no reason for a let-up in this activity for at least the balance of the present year, and almost certainly the whole of the year 1900. As far as we can see, there are no clouds in the sky. The census will show that we have between 75,000,000 and 80,000,000 of people here. For the last half of 1893, for all of 1894, 1895 and 1896, this vast army of 75,000,000 people lived on short rations of everything; people lived up their old clothes, bought no luxuries; factories made no repairs, decreasing rather than increasing their output; sails were all reefed; everything was on the retrenchment order. Meantime nature went on multiplying the good crops at home and giving them inferior crops abroad, so that the farmers were first made rich, then the good times extended everywhere. Now everyone who wants employment and is able to work can get work at good pay, and there seems to be no overproduction. The consuming ability is even up to the limit of the enormous output. We have stretched our lines into the foreign countries, and are very much pleased with our success there."

Acetylene Is New.

R. C. Daniels, general manager J. B. Colt & Co., New York: "The acetylene-gas business, which is our principal industry, is so comparatively new in the field that we have no previous data with which to make comparison. We would say, however, that our business is increasing and the goods are being shipped to all parts of the United States, as well as to foreign countries. Our foreign business has this year increased over tenfold over what we did last year, but as it is a new business, the condition of trade in the acetylene line could not be determined."

Good for Two Years.

The National Supply Co., New York: "We look for continued activity and prosperity, judging from our own business, for at least two years. Our experience has been that around the time of the presidential election business is somewhat dull, and if the administration changes, or another party comes into power, it takes some little time for the people to gain, as it were, confidence. Up to that time we believe that business will continue to be active."

Iron Too High Compared with Farm Products.

Hench & Dromgold, York, Pa.: "We have had a larger trade during the last year than previously, the greater portion of it, however, being export trade. The domestic trade on farming implements has not, as a rule, been larger than the previous year. We, however, are at present carrying a larger stock of raw material, iron and steel, than we have ever carried before. In our opinion, think the domestic trade on agricultural implements will not increase at the present high prices of raw material unless the farmer can secure better prices for products of all kinds, and we think it is impossible for the volume of business in the iron and steel trade, and at the high prices ruling for the last six months, to continue for a year or two in the future without a cor-

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responding advance of prices in farm produce, unless it is due altogether to a much larger foreign trade for all kinds of goods. The present prices of pig iron, steel, etc., are entirely too high in comparison with all other classes of goods, especially farm produce."

Home and Foreign Trade Active.

L. G. Read, general manager Abendroth & Root Manufacturing Co., New York: "The present degree of activity, compared with former years, in our business, is remarkably greater. Our orders are so far ahead of our capacity that we have instructed our sales department to take no more large contracts for spiral-riveted pipe for water-works purposes this season. We are fairly well supplied with raw material, but have had to use a great deal of foresight in order to be even as well supplied as we are now. We cannot carry any finished material on hand, as it is consumed in filling current orders. The actual condition of the iron market generally seems to point to continued prosperity, but it is impossible to foresee what political effects may mark the future in this line. Our foreign trade is very satisfactory."

Best in Five Years.

Hutchinson Bros., manufacturers of furnaces, ranges, etc., Baltimore, Md.: "This is the best season we have experienced for at least five years. Our business from the first of the year to the present time has increased one-third over any previous season for that length of time. While we cannot say that our orders are much ahead of our production, yet we have been kept running to our full capacity, and prospects for a heavy trade this fall are very encouraging."

Stock of Raw Material Getting Low.

Franklin S. Miles, manufacturer of brass, iron, steel and German silver machine screws, Philadelphia: "We are very busy on special screw work at the present time. We do not make any work for export trade. We only work from orders, and not for the regular market, as the Eastern firms do. We are busier than we have been for the last four years. We are carrying more stock, that is, iron and brass. Our stock is getting low now, and we find that we cannot get prompt deliveries from the wire companies, as they are very busy. It takes us two months to get our wire, and it has caused us a great deal of trouble in filling our orders. I think from all indications that the good old times have come back to stay for a while. But we find it a hard matter to increase our prices on our goods, as the customer kicks very hard about paying the advance."

Supplying Home and Foreign Markets.

Chas. A. Schieren & Co., New York: "We are very busy in the manufacture of leather belting. Manufacturers all over the country seem in very active operation, and have all the business they can do. We are, therefore, in a position to know the state of trade in the manufacturing line. Indications are that we are going to have a big fall business and a prosperous time. Our foreign trade is also increasing, there being a notable demand for the better class of goods. We are trying to supply the home market and the foreign market."

Raw Material Bought Ahead.

A. H. Blackburn, general manager the Fuel Economizer Co., Matteawan, N. Y.: "We are turning out more than double the quantity of our economizers than we were at this time last year, and our orders are ahead of our production. We are carrying much more raw material than we have done before, and have bought considerable stock ahead. We have at present at least 50 per cent. more

raw material in our yard than we had at this time last year, and it is necessary for us to have it on account of the increase in our business. We look for continual activity for two or three years to come if politics do not interfere in any way."

Home Demand Absorbs Full Product.

Bangor Excelsior Slate Co., Easton, Pa.: "This has been an unusually busy season with the slate manufacturers in the Bangor region, and with our company the indications all point to a more settled market than we have enjoyed for several years. You are probably aware that many inferior grades of slate have been passed off as Bangor until architects and the trade in general have become suspicious of getting genuine Bangor even when specified; but by the adoption of our trade-mark we have overcome this uncertainty so far as our Bangor Excelsior is concerned, and architects are appreciating the new method very highly, and it has enlarged our sales to such an extent that we are crowded with orders, notwithstanding our increased production this season. In consequence, we have been obliged to withdraw all effort looking toward foreign markets as an output for our product."

Business Cramped by Lack of Raw Material.

Puchta, Pund & Co., Cincinnati, Ohio: "Our business is good at the present time, and far ahead of last year, and from all indications we see no reason why this activity should not continue for some time. We find this same condition existing among all of our customers, and many of them could do more business if they could get more raw material."

An Enormous Activity.

R. L. Ginsburg & Sons, iron, steel and metals, Detroit, Mich.: "We find possibly the strongest market we have seen in a great many years, and it looks to us that, at least for the balance of this year, there will be a continuation of this enormous activity. Our trade with the foreign markets has practically ceased for the present, because of the fact that the material is worth considerably more in this country today than it is in the foreign countries."

Unprecedented Activity in Trade.

John T. Birge, vice-president and treasurer Adams Laundry Machinery Co., Troy, N. Y.: "Our experience is in common with other manufacturers in similar lines; the demand for manufactured product in 1899 has been unprecedented. At no time during the present year have we seen our orders filled, and it has been impossible to keep up stock in full lines, so great have been the demands made upon us for special machines and plants. Our business up to the first of August has very largely exceeded that of any previous year in the history of this company. We have, however, increased our facilities during the year, so that we have been enabled to meet the situation without unusual delay to our customers. As we do not inventory until January, it will be difficult to answer your questions in regard to raw material and finished goods; but as the volume of our business is so much increased and continuously so, I should say that we are carrying a much larger quantity of both raw material and finished stock than we had on any corresponding period in former years. The increased demand for machinery has been confined to no particular section. We have more and larger orders from every direction than in previous years. This no doubt is to be attributed in a degree to the general improved condition of business. But in the matter of laundry machinery there is no question but what the business of laundrying is rap-

idly on the increase throughout this country and in foreign lands also. We are developing rapidly in trade with Great Britain, and as our London agent sells in other markets on the Continent, no doubt our goods reach much further than we know. We are receiving requests for agencies from foreigners continually, especially from Cuba, Philippines, and, in fact, from all the points in our newly-acquired possessions. It is evident that the boiled shirt and the glistening white collars and cuffs are bound to follow in the wake of the stars and stripes, and that wherever the American eagle flops its wings its shadow will rest upon the scrubbing processes of the modern laundry. We see no present prospect of any diminution in the enlarged measure of trade that marks the present year, and the writer's observation, which is wide in general manufacturing circles, confirms his belief that there are ahead of us a very considerable period of business prosperity. Of course, this is largely conjectured, and I suppose that opinions vary according as the author of them is a pessimist or an optimist. The fact that the world is turning toward us for all kinds of goods will certainly make the foreign demand much larger than ever before for laundry machinery. The writer was in England just a year ago, about the time of the ending of the Spanish war, and spent three weeks in commercial circles in London and other parts of England, and he came back strongly impressed with the belief that the war had done more to advance American commercial interests, so far as their relations to the world at large were concerned, than all the efforts of preceding decades. The elapse of a year confirms and strengthens the opinion then formed. There are always two dangers that confront business in such a condition as things stand today, and I believe that only unreasoning demands on the part of labor and equally unreasoning refusal on the part of capital to grant labor its fair proportion of the profits coming from a bettered condition of trade, can prevent the tide of commercial prosperity in the United States from rising to a record mark during the next year."

Coal and Coke Advance.

A. C. Danner, president Mobile Coal Co., Mobile, Ala.: "Generally speaking, business in Mobile is very active; much building going on, more so than for years, and the indications are that this will continue for some time. As a seaport, Mobile continues to grow. Its ocean shipments, both in and out, are steadily increasing. A large business here is the manufacture of lumber and timber, mainly for shipment to foreign ports, and this is more active now than ever known. The prices are good. As regards the business in which I am engaged, our main business is coal. We are hampered by the want of a supply of good cheap coal. While there is being more coal mined in Alabama than ever before, the supply does not equal the demand, and prices at the mines for coal and coke are steadily advancing. The mines are now getting about twenty-five cents per ton more for coal than they were a few months ago, and all mines mining a good grade of coal, we believe, are refusing orders. This great increase in the demand for coal has come about partly from the increase of business generally through the country tributary to the Alabama mines, but principally on account of the great increase in the production of iron, all the iron furnaces running to their full capacity, and yet unable to supply the demand on them. My firm also imports Portland cements. This business is unusually good. While there is now being an immense amount of Portland and other

grades of cement manufactured in the United States, and some of the factories of this country have learned to make and are making very high-grade cements, still the demand at this time for cement through this section, and I believe through the United States, is greater than the supply, and it is difficult to get cement. We have brought over from Europe this year more cement than ever before, but are now sold out, and find it difficult to replenish our stock."

Caring for the Rush.

The Wolf Co., flour-mill machinery, Chambersburg, Pa.: "The condition of the trade during '98 and '99 has been extremely satisfactory with this company. Our trade last year was quite in advance of what we had had several years prior, and trade this year is considerably better than what we can well take care of. Our orders are fully 25 per cent. over our product, and while we are increasing our facilities right along, yet the increase in business appears to keep us back about the same percentage right along. We are carrying a fair quantity of raw material, as much as we can get hold of. We are sorry to say we have no finished product on hand. Do not have any stock whatever. We have no reason to think that the business in 1900 will be any different from what it is this year, and so far as we are concerned, we propose to be better able to take care of the rush next season than what we are this year. We are not doing any foreign business at this time at all. The activity of the home trade has so absorbed our output that we are leaving the foreign markets alone entirely."

Waiting for Supplies.

F. S. Hunting, Fort Wayne Electric Works, Fort Wayne, Ind.: "As we are a new corporation that has been doing business only since the first of May, it is rather a difficult matter to answer all your questions intelligently. The conditions under which our predecessors here worked was such that a satisfactory comparison with present business is hardly admissible. We have, however, found that business at this time of the year is much more active than the same time in former years. Our orders are not ahead of our production to any great extent, as we have recently started work and are in a position to make prompt deliveries. We are endeavoring to carry more raw material in stock than in the past, owing to the difficulty we find in getting it. We have found it necessary to place orders for several months' supply ahead in order to be sure of getting anything at all. We are looking for very large business this fall. Most of our business is domestic, although we do a little foreign business. Foreign work we have not yet developed to the extent we expect to later."

Greatest Activity Ever Known.

W. E. Alman, Jonesville, S. C.: "From a knowledge gained by extensive traveling over the South and coming in contact with business men and manufacturers, I have never known such a degree of activity in the different trades and manufacturing interests. As compared with former years, and especially two to four years back, I consider the present year far ahead. I find manufacturers, especially in the textile business, with good stocks of raw material, but with no accumulation of finished product, and in most cases far behind on orders. Lumber is in better demand, and at better prices than formerly. I cannot think of any reason why the present activity should not continue, except that there naturally seems always to be a kind of reaction following a period of prosperity. A great deal of the manufactured product of the territory with which I am

acquainted is for export trade, but could not say what per cent. I wish to say that I know the Manufacturers' Record is doing inestimable good for the South."

Buying Raw Material Ahead on Account of Advancing Prices.

Frank G. Bolles, Bullock Electric Manufacturing Co., Cincinnati, Ohio: "We have approximately four months' work ahead, and find it constantly on the increase rather than falling off, and we have just commenced to work our entire force during the evening. Until now our stock of raw material has been kept as low as possible, owing to the extremely high prices which have prevailed. In view of the tremendous activity, however, which exists everywhere, we are very much inclined to buy for future business, as prices are on the upward trend rather than otherwise. We have found it absolutely impossible to carry any finished product whatever, owing to the volume of business which has come to us from every quarter. We see no reason why the present activity and prosperity should not continue, at least for two or three years. Our foreign trade is rapidly increasing, especially in Great Britain. In this territory alone we have shipped within the last three months between \$60,000 and \$75,000 worth of our product. Our South American business is also rapidly improving."

Domestic Trade Enough.

W. H. Jacob, the Triumph Electric Co., Cincinnati, Ohio: "Our business so far this year exceeds that of any former year by over 100 per cent.; or, in other words, over double of what it has ever been. Our orders are decidedly in excess of our production, and this is due to the fact that we are unable to get raw materials to finish up our machines. The present prospects, judging from the inquiries we have, look as though business was going to continue actively. We are not pushing actively for foreign trade, owing to the fact that we have all we can do in taking care of our domestic business."

Never Before so Busy.

J. W. Ruger, the J. W. Ruger Manufacturing Co., Buffalo, N. Y.: "Our business never has been so good since we have been in business, from 1856 up to the present time. We are now about three months behind our orders, especially in our machine department, which orders are principally from foreign countries. Our gas-engine business is driving us to our full capacity, and orders are crowding onto us much faster than we can build them. Our only trouble is the getting of raw material, and the long time that our customers require on goods and slow collections. The outlook of continued activity in both branches of our business and our future prospects of trade never looked better. Our foreign trade is constantly increasing in volume, and we find it hard to take care of it, and from the constant inquiries coming in daily, we look for a heavy trade in that line."

Sold for Months Ahead.

John A. Topping, president Aetna Standard Iron & Steel Co., Bridgeport, Ohio: "The degree of activity we are experiencing in our lines of business is much in excess of any former year, the mills in all departments being weeks, and in many cases months behind on deliveries of specifications that should be shipped immediately. As a general statement, we think it is safe to say that the mills as a class, if our own condition reflects that of others, are sold up for months to come. The prospects are bright and the future promising indeed. Export orders have fallen off some, owing to our inability to take care of them. More business could be done, provided

the mills had the capacity to take care of both home and foreign trade."

Material in Plenty.

E. J. Hiertz, Theodore Hiertz & Son, St. Louis, Mo.: "Our business this year has been somewhat better than the past few years. Sales amount to considerably more in value, owing to the higher prices of all metals. We are not carrying as much stocks as usual, owing also to the very high prices of metals, such as tin, copper, antimony, lead, etc. We have no trouble in getting all the material we want. Our foreign trade is on an average with former years. We expect the balance of the year to be good. Cannot say much for next year."

Turning Off Orders.

G. H. Peacock, Peacock's Iron Works, Selma, Ala.: "We are away ahead of any previous year. We are turning off orders every day and have as many, if not more, orders than we can fill for the next two or three months. We look for continued activity and prosperity until the country begins to produce more iron than the consumers use, and then there will be a drop in the business that will be felt all over. Our home market has absorbed our output, so that we are not able to take in foreign business."

Making Large Shipments.

Charles H. Besly & Co., Chicago, Ill.: "We are making large shipments of Helmet oil, Perfection and Bonanza cups, to all portions of the country, and are procuring numerous orders for the other specialties of our manufacture, such as parallel clamps, taps and dies of all descriptions, Gardner die-stocks, Gardner grinders, lathe dogs, etc."

Absorbed in Orders.

H. W. Hoyt, secretary Gates Iron Works, Chicago, Ill.: "We are doing the largest volume of business in our history. The capacity of our works is practically absorbed in present orders, for the best part of a year. We are carrying more stock than we have ever carried before by 50 per cent., and we look for continued activity for a term of years. Our foreign trade keeps up to the average."

A Unique Situation.

M. De Puy, New York, N. Y.: "Never did such a boom in all kinds of business appear in the United States before. How long it will last no one can tell. Iron and steel doubled in price almost instantly; that commodity is outrageously high. My Paragon boiler is progressing fairly well. I am now putting boilers in a Western river steamer at Evansville, Indiana."

Have Refused Work through Running Night and Day.

G. H. Bushnell, manager G. H. Bushnell Press Co., Thompsonville, Conn.: "We have not much time for anything except close application to our regular business at this time, and, in fact, we know but little about the condition of trade outside of our works, excepting that it is a slow process to get our orders for stock supplies filled. As regards our business, we have more orders than ever before at one time on our books. We are running our works with two forces of men the twenty-four hours through. Have refused work enough to run our works for at least three months at the rate we are running now. Would say that we are carrying more raw material than for many years. We have no finished product, for as fast as the machinery is finished we ship it. In our line of business the activity will continue until well into next winter. Our output at present is almost entirely cottonseed-oil-mill machinery, with a good number of cloth baling presses for the new cotton mills going up in the South. At present we are having no foreign trade, as we

could not accept orders if they were offered us."

Busy at Home.

F. H. Stillman, the Watson-Stillman Co., hydraulic machinery, New York: "We know of a great deal of work which will probably be placed during the coming year which is in our line that would come our way providing we could take care of it. The increased rates of materials are, however, checking the fulfillment of the plans. We are carrying a greater stock of material than ever before in our history; in some lines a greater finished product, in the aggregate probably no more. We are making no effort to obtain foreign business, as our home trade takes care of all that our shop facilities will permit our getting out. We have had, however, more foreign business than in previous years, largely in the line of tools for new works under American management, because of the use of tools for similar purposes where the managers have been employed."

Foreign Trade Important at All Times.

Saginaw Manufacturing Co., Saginaw, Mich.: "Our business is about 35 per cent. greater than last year, and we are about two months behind on our orders. We are carrying about 50 per cent. more than our usual supply of raw material. Finished product is very low, only about one-half of the usual amount, the orders taking it faster than we can produce it. We are looking for a continued and prosperous business for some time. Our foreign trade is increasing in about the same ratio as our domestic, and we think that a manufacturer who neglects his foreign trade on account of the unusual prosperity of his home trade would be shortsighted, our theory being that the larger the field the less apt you are to be affected by depressed periods in any one section. We conduct our business on these lines."

Mills Everywhere Overrun with Orders.

The Foos Manufacturing Co., Springfield, Ohio: "We have been unusually busy for months past trying to keep up with the demand for our mills for grinding oilcake, as well as, also, as for grinding grain, of which we make a line of both. We are somewhat embarrassed about getting stock, as the mills and factories everywhere are overrun with orders and are unable to keep up with the demand upon them. The outlook certainly seems encouraging, and we are hopeful for a better business the coming year than we have had for a long time. We have always had some export trade, but have recently made some new connections in that line that promise very favorably."

Production Cannot Keep Up with Demand.

Merchant & Co., Inc., Philadelphia, Pa.: "We have had a very active trade all through the year, and the demand for goods in our line has continued during the summer months somewhat beyond our anticipations. It is our impression that prices will remain firm for some months to come, probably until early spring, and that in all probability higher prices may be looked for on some goods. The production is going ahead at a high-water mark, but it can hardly keep the pace with existing demands and the many future contracts yet to be filled. It is a notable feature of the present activity, however, that the enormous demand for metals in all lines comes from manufacturers. The purchases due to improvements and betterments of real estate, or from any concerns not included among manufacturing interests, is comparatively small. We would infer from this that the country at large is not devoting much time or money, since the return of

prosperity set in, to building operations, but that when the tide turns from purely financial business many will seek investments in real estate and improvements upon it."

Have Probably Entered Upon a Period of Great Activity.

G. N. Bierce, secretary the Stilwell-Bierce & Smith-Valle Co., Dayton, Ohio: "For some months past we have been running night and day in all departments of our business. We have had the largest business in the history of the company, and all the indications point to a continuance of great activity in our line of work. Our foreign business is constantly increasing, although for the past few months we have not been pushing that, owing to the very large home demand. Still we are not neglecting our foreign business. Our impression is that the country has entered upon a period of great prosperity, and we see no reason why it should not continue for several years unless there should be some radical political changes or upheavals that would have a tendency to unsettle matters. Our stocks of raw material are very low; in fact, we find it difficult to get raw material in sufficient quantities to keep us going. We think we have never had so bright a prospect in the history of our company as at present."

The Prospect Favorable.

S. Reid Holland, the Asphalt Roofing Co., St. Louis, Mo.: "Our present company has been organized since January 1, 1899, and consequently cannot express our views further than to say we are having a very good business, and from the prospects at the present writing, we look for much better business in the near future and the coming year. It is the opinion of the writer that business is much better in every line this year than it has been for several years past; in fact, there is a very marked degree of improvement over last year."

Has Added Machinery.

The Keasey Pulley Co., Toledo, Ohio: "We have found it necessary both to add additional machinery and run extra time in order to supply the demand for the Keasey pulley. We have experienced some difficulty in obtaining supplies. Our foreign trade is small; have made but little, if any, effort for it. We see no reason why this activity should not continue. Building in this city has been active. We begin to hear complaint that the advance in lumber, nails, etc., is checking it."

Based Upon Crops.

J. A. J. Shultz, president Shultz Belt-ing Co., St. Louis, Mo.: "The immense crops all over the West—over 300,000,000 bushels of corn in Kansas alone—will make fat cattle and hogs, and this will bring lots of money to the West which will finally work its way around east and make business good for all. The outlook is very good for continued prosperity. Foreign trade is also good."

Active and Satisfied.

Walter L. Flower & Co., steam specialties, St. Louis, Mo.: "We are just beginning on our second year in business, consequently it is not possible to compare the volume of business with any preceding year. Suffice it to say, however, that the demand for our line of specialties and for which we are agents is quite active and very satisfactory."

Sold Much Ahead.

C. S. Riffin, Bertsch & Co., sheet-metal-workers' machinery, Cambridge City, Ind.: "We are the busiest of any time in the history of our institution. Our business has increased nearly 100 per cent. within the last year, and we now have orders on our books for delivery several months in the future. We

are carrying from 100 to 200 per cent. more raw material than we did a year ago, but we are carrying scarcely any finished product, as we are sold ahead all the time. Judging from the amount of business we have done in the past few months and from the present outlook, we can see nothing but continued activity and prosperity ahead of us. Our foreign trade has increased but very little, as we are worked to our utmost capacity on domestic orders, and are not reaching or making any effort for foreign trade at present."

Raw Material Scarce.

C. S. Knight, Siemens & Halske Electric Co. of America, Chicago, Ill.: "The electrical business today is something similar to '91, with the exception of our inability to secure raw material as promptly as at that time. The demand for prompt delivery seems to be growing every day. From the outlook we should judge this will continue through the coming year. The increase of foreign shipments is without precedent."

Active Business Expected Despite Increased Prices.

The Yale & Towne Manufacturing Co., New York, N. Y.: "During the past six months our business in all departments has been exceedingly active—much more so than during the past few years. Owing to the largely-increased cost in the price of raw materials and labor, prices in our line have advanced quite sharply recently, but the indications are that these advances will not affect the demand, and we look for an active business for some months to come."

The Force Doubled and Running Day and Night.

Adolph Mueller, secretary and treasurer H. Mueller Manufacturing Co., Decatur, Ill.: "We are employing double the force that we employed last year at this time, and our output has been about 100 per cent. increase over last year. In order to double the output and double the force of men it is necessary for us to run night and day. We have been running night and day for the past six months. We have orders on file which will run us for the next sixty or ninety days. We look for continued activity in our line, as the jobbers and trade do not hesitate to place their orders for the supplies they will require for the next sixty or ninety days, although prices have been advancing right along. We do not think that prices will decline, and, if anything, they will advance. We are not catering much for the foreign trade, as our home market, which we think is the best market, takes all the goods that we can supply at the present time."

An Increasing Demand.

H. M. Brewster, treasurer Millett Core Oven Co., Brightwood, Mass.: "We find business in our line increasing very fast, and a steadily-increasing demand for all kinds of supplies in the foundry line, and also for every improvement that can lessen the cost of work and make it better. We have never sold so many core ovens in the same time as during the past six months, and never had so many inquiries. Everything seems to betoken a steady and good business for the next few years."

Congested with Orders.

John J. Frederick, manager Standard Scale & Fixtures Co., St. Louis, Mo.: "Our trade is considerably better than in former years. We experience considerable trouble in getting goods for delivery promptly from the manufacturers whose products we are handling, owing to the fact that they are congested with orders. We don't manufacture. We have every reason to look for continued activity and prosperity from present indications, and take a very optimistic view

of things. Our trade is mainly local, and in territory directly tributary to St. Louis, and we make no attempt to secure foreign trade."

An Excellent Prospect.

F. M. Hicks, railway equipment, Chicago, Ill.: "I find a condition of trade better in every way than it has been for years, with an excellent prospect of the present activity extending over a period of two or three years. While there may be less activity after this year, I believe that the present large volume of business will continue for some time to come."

On the Lookout.

Norfolk Sand & Cement Co., Norfolk, Va.: "Our business is hardly old enough to write you much about yet. We started August 1, 1898, and while only a year old, the business has increased a great deal over its volume at time we began. We are anxious to get in correspondence with people who use graded ocean-shore sand and those who use white flint sand, and if we can find out how to locate them and get them to handling some of our output we will then have something worth writing you about."

Finished Goods Sold.

John C. Dean, Dean Brothers Steam Pump Works, Indianapolis, Ind.: "The demand for pumping machinery is heavy. We are working to our full capacity and adding machinery. We have sold out all our finished product and are working entirely on orders. We see no reason why the prosperous times should not continue. Our foreign trade is small."

Crowded with Work.

S. F. Laucks, manager York Safe & Lock Co., York, Pa.: "We are crowded with work, and we are carrying a very much larger stock of raw material than formerly, owing to the difficulty and delays in getting materials, and would advise that we look for continued activity and prosperity, and might advise that our foreign trade is increasing, notwithstanding the activity of the home market."

Way Behind Orders.

A. E. Cheney, secretary and sales manager the Marion Steam Shovel Co., Marion, Ohio: "We are way behind orders. This has been the case since the early part of the year. Had our capacity been two and one-half times what it is we could easily have taken care of our product this year. We are turning out from ten to twelve completed machines each month, and are way behind our orders at the present time. This being the case, we, of course, are not carrying any finished material. As to raw material, we have quite a stock of some kinds; but there are other kinds that we find impossible to get fast enough to supply our needs, and are seriously inconvenienced on account of it. We look for continued activity and prosperity for some time to come, but think that it cannot be expected to continue indefinitely. Our foreign trade is increasing with every year, and is in a very satisfactory condition."

Barely Able to Meet Orders.

E. R. Fish, secretary Heine Safety Boiler Co., St. Louis, Mo.: "This is the best year which this company has ever experienced, 1893 having been the previous best year. We are just about able to keep our production along with the orders, and are carrying more raw material than has been our custom in the past years, although the great number of orders has precluded the possibility of our carrying any finished product. It is practically impossible to obtain supplies of metal from steel mills inside of two or three months, and orders placed some months previous are keeping up our supply of raw material. We should judge from the business which we are doing

and the inquiries received, that the present activity and prosperity will continue. While we have done a small amount of foreign trade, we are not looking for it, as our output can be used to better advantage at home."

Domestic and Foreign Trade Increased.

F. A. Walker, president S. H. Sinclair Co., laundry machinery, Chicago, Ill.: "We have been unable to look up the exact figures of the increase in our business for the past year, but can give you approximately the figures: Domestic trade, 10 to 15 per cent.; foreign trade, at least 25 per cent. We could have done very much more business had we not been handicapped by the failure of our foundries to furnish us castings to work with, from the fact that we have been unable to run nights, as heretofore. By such action we believe our orders have been cancelled to the extent of at least 10 to 15 per cent. We see no reason for any lessening of continued activity and prosperity of our business, and from present appearances we should judge the business should increase at least 25 per cent. next year. Foreign trade has increased very materially, we should say at least 25 per cent., the present year, and we are taking proper care of it. We do not mean by this that we are losing our interest in our home trade, but foreign buyers usually purchase standard goods, which we are able to furnish in less time than our home trade, as our home buyers continually wish something special."

Hard At It.

Geo. C. Steele, secretary and treasurer the North Electric Co., Cleveland, Ohio: "For the past year we have confined ourselves almost exclusively to the manufacture of telephone-exchange equipment, for the reason that the demand for this class of goods has been so active that we have been obliged to more than double the capacity of our plant in order to keep pace with the demand made upon us. We believe this to be the case with all the leading telephone-exchange manufacturers catering to the independent field. Our books now show orders that will carry us into next year, and if our present capacity were three times what it now is we would have no trouble in keeping our works running full time. Relative to raw material, manufacturers in all the different lines in which we deal seem to be in the same congested condition as ourselves, and it is a difficult matter to obtain material fast enough to meet our requirements. Our stock of finished product is about nominal, as nearly everything we are now turning out is on contract orders. The activity in our line seems to be rather on the increase than otherwise, and we look for a prosperous condition for at least another year; further than that it is difficult to prognosticate. Our foreign business is confined exclusively to Japan, though the bulk of our output is for exchanges in this country. The question of overproduction and high prices is not an element for serious consideration in our line of work, as nearly everything produced is in the filling of actual orders for new exchanges throughout the country, together with orders for repairs and new equipment."

Increasing the Output.

Isaac S. Boyd, president Southern Saw Works, Atlanta, Ga.: "Our orders are fully 20 per cent. ahead of our production at the present time, but we are increasing our output, and hope to be able to meet the demand. We are carrying in raw material and finished product about the same as heretofore. Judging from our own standpoint, we are of the opinion that there will be continued activity and prosperity for an indefinite time, at least

for the next five or six years, depending largely upon the demand for export. We are doing but little foreign trade, as our output is absorbed by our home market, which is decidedly on the increase from time to time."

A Birmingham View.

Alber & Byrne, Birmingham, Ala.: "It seems unnecessary to state a well-known fact, that the industrial enterprises of the Birmingham district are in a more prosperous condition at the present day than they have been at any time since their opening development. We are mining more coal, ore and limestone, and making more pig iron, than at any time in our history. Our pipe works, steel plants, rolling mills and other industries are all running to their fullest capacity, and they find a ready market for all they can produce. The last year has attracted more attention from outside capital to our vast resources and the many openings and opportunities for profitable investments in the Birmingham district than any like period since the first inception and development of our wonderful mineral resources. The making of commercial steel and the export trade in pig iron has marked a new era in the future possibilities of the Birmingham district, and capitalists interested in that line of production are now hastening to place their money in the many profitable openings offered for investment, in the mines, furnaces, steel plants and mineral lands of Alabama. Our business of civil and consulting engineers has received its share of prosperity from the above-described developments, and we are pleased to state that our business has materially increased in all its branches, and that we see nothing in the immediate future to lead us to think there will be any cessation in the industrial activity of this district for some time to come. We do a general engineering business, and have work now under construction in Alabama, Mississippi and Georgia. We find in all the above-named States a marked improvement in their industrial conditions."

Very Well Satisfied.

V. H. Kriegshaber, president the Atlanta Terra Cotta Co., Atlanta, Ga.: "We are very well satisfied with the season's business and the prospect which is ahead of us. We note an increased number of inquiries for material in our line, and believe that the building operations in the South will continue with similar activity during the coming year."

Orders from Abroad.

Buffalo Forge Co., Buffalo, N. Y.: "At present our works are crowded to their full capacity, and we are unable to meet orders with the regularity and celerity we have been able to give in the past. We are receiving orders continually, and they are considerably ahead of what they have been in past years. We have more raw material in stock than we have ever had, but we are unable to keep a supply of finished product on hand. We have been successful in obtaining our share of the foreign trade; in fact, have lately received more and larger orders from foreign countries than ever before, and from the inquiries we have received from other countries we believe that we will receive more shortly."

Large Volume of Business.

B. V. Scudder, general manager Western Electrical Supply Co., St. Louis, Mo.: "We have never seen the time when the prospects for a good business on a profitable basis seemed to be so bright. We are getting a large volume of business on a very satisfactory basis, and in place of the demand diminishing it is getting greater every day, and we hardly see any cause to think that the era of prosperity which we are now entering will be

shorter than three or four years. We think that the prospects for business in the South are particularly flattering, and we are making an extra effort to push our business out in that direction. We are giving very little attention to the foreign market, as we find that the demand for our goods at home is about all that we can take care of."

Rushed with Orders.

A. O. Kuehstedt, president Charles E. Gregory Co., Chicago, Ill.: "Our business is hardly that of a manufacturer, but more of a specialty house, our particular field being the rebuilding and sale of second-hand electrical apparatus exclusively. In this branch we come in touch with owners of electrical apparatus throughout the country. Our works are at present very much rushed with orders, and would not need another order for two months to come to keep all of our men employed. We are at present carrying an unusually large stock of machines and raw material, having anticipated this activity, but are experiencing considerable trouble in the delivery of certain lots of raw material, particularly copper wire, where the mills are from three to four months behind on orders, steel castings and all kinds of iron product. The manufacturers of electrical apparatus throughout the country are slow in their deliveries, some of the largest concerns advising us that they have from three to four months' orders ahead. We are looking to a very active state of business for several years to come for everybody interested in electrical affairs. We do not do a large foreign business, as the United States offer a large enough field for our energies at present."

They Were Prepared.

Geo. W. Childs, Jr., secretary Penberthy Injector Co., Detroit, Mich.: "We anticipated a very active season, and prepared for it by accumulating a large stock of goods the first of the year, and by largely increasing our facilities by putting in additional machinery, but the increase in business far exceeded our highest expectations to such an extent that since the first of April we have been at times more than six weeks behind orders, and are now on some lines still two and three weeks behind. From April 1 to July 1 we ran our shop nights in order to increase our output. We are carrying a larger supply of raw material than ever before, having purchased heavily early in the season in anticipation of the rise in metals, but owing to the very heavy demand for our specialties our stock of finished goods is much lower than ever before, or at least much lower than for many years past, as we are shipping the goods as rapidly as we can turn them out. As nearly as we can judge, the next few years should be years of continued activity and business prosperity. The outlook in our own business seems to us never to have been better, and the reports from our traveling salesmen indicate a similar view on the part of the business men throughout the country. The increase in our business has been equally as active in foreign fields as in the home market, possibly because we have paid special attention to pushing the foreign business."

Hundreds More Employed.

Geo. Otis Draper, secretary the Draper Company, Hopedale, Mass.: "We are enjoying a period of activity such as we rarely meet with; in fact, we are employing several hundred more men than ever before, and are actively engaged in enlarging our works, with the idea of at least doubling our product in its most important line. The demands vary in different departments, but in some important lines our orders extend beyond a year's production at our present rate of manu-

facture, although our enlargements will, of course, provide for some of this surplus. We should be carrying our normal amount of raw material were it possible to get our orders filled promptly. In spite of the fact that we are paying double prices for many iron and steel products, we find it very difficult to have our need supplied. We never carry any stock of finished goods ahead, but only fill definite orders. Judging from present appearances, this activity will continue for some months, although we can, of course, foresee that there must be a limit, as our market is definitely restricted to our own country, and the consumption of cotton fabrics is in some way measured by the population, which is not increasing beyond its normal rate. Statistics as to our foreign trade would be of little value for generalizing, as we have a special line in patented improvements which are not sold by us in other countries to any great extent. Like many other manufacturers of iron products in which the labor cost is a large factor, we find it impossible to compete on equal terms with the cheaper labor in England, especially as the English manufacturers have a control of the cotton-machinery industry outside of our own country that has been established for years."

Brighter Than for Years.

Robert Jacob, Jr., Ruemmel & Siebert Refrigerating Machine Co., St. Louis, Mo.: "In our line there is a bright outlook for the coming year, much more so than it has been for a number of years. Our orders are about two months ahead of our production. Our raw material and finished products have been increased considerably over former years. We look for business in our line to be almost double in the future throughout the Southern States."

Factory in Full Blast.

The John H. McGowan Co., Cincinnati, Ohio: "We are forced at present time to work our factory to its full capacity, as well as extra hours, to fill our orders. We see no indication at this time of any cessation; in fact, everything points to even a greater volume of business."

Additions to Machinery.

Robert Kerr, White Manufacturing Co., gasoline and kerosene appliances, Chicago, Ill.: "Our business will double this year in volume. Since February 1 we have been from one to three weeks behind on our orders, and we have enlarged our capacity by adding some new machinery. We look for continued activity. Judging from our prospects, we think the fall trade will be very heavy. Our foreign business for this year has been very satisfactory, and much larger than any previous year, having been on a larger scale. We think the outlook for our goods for the next year is very flattering."

Independent of Mills.

W. H. Clark, the W. J. Clark Co., plate and sheet metal workers, Salem, Ohio: "We are pleased to say that there is still more being done than has been common for this time of year, though there has been a marked slackening off of orders during the past month, due probably to hot weather and to a little hesitancy that has been felt about starting new businesses or enlarging old ones in the face of an unsettled iron market. Some weeks ago we had difficulty in keeping up our usual supply of plate and sheet steel for elevator buckets and other work because we were cutting up two to three times as much daily as ever before, and because the demand on the plate mills was far in excess of any previous time and in excess of their ability to supply. Conditions have changed somewhat in the last six weeks, so that though we

are busy and running full force, we are not so rushed as we have been, and have no occasion to beg the rolling mills to hurry up our orders for plate. We carry an assorted stock of plate, amounting probably to an average of \$8000, and of ready-made elevator buckets about the same amount. In spite, however, of the large assortment of sizes and gauges of plate and sheet that we try to keep in stock, we are compelled to order special shapes and thickness every day or two for special work required of us. A few months ago it was with much begging and long waiting that we got such orders filled, but now there is less difficulty, which may be taken as evidence that the plate mills have increased their capacity, or they are less crowded with orders—a little of both, perhaps. While we look for continuance of and a much larger trade for some years to come, we do not expect such a rush as in the past year, because supply and demand will adjust themselves to more easy working of trade. We look for a steady increase of export trade in almost all lines of American manufactures. The splendid work that has been done and is being done by the National Association of American Manufacturers in opening up foreign markets for American goods will keep the wheels of the shops moving with profit to the country at large until the Japanese and Chinese catch on and cut us out in some places."

Shops Order-Full.

C. C. Hanch, Nurdyke & Marmon Co., flouring-mill engineers, Indianapolis, Ind.: "Business in our line is more active than it has been for a number of years; in fact, we are quite confident that we have more orders in our shops at the present time than we ever had at any one time before in the history of our company, which was established in 1851. We are at this time probably sixty days behind our orders. As our goods are mostly manufactured to order, we do not carry a very large stock of finished product, and the largest items of raw material are lumber and pig iron, and as is generally known, the latter is hard to buy at any price at this time. We anticipate continued activity in our line, with a reasonable degree of prosperity, but of course margins of profits in all lines are less than they were in former years. Except in the cases of patented or specially-protected articles, it is our judgment that the era of large profits is past. While our foreign market extends practically over the entire globe, it has never been very extensive, on account of natural limitations. We cannot see that the activity of our home market has in any way curtailed our foreign trade."

Lots of Work on Hand.

John T. Gibson, treasurer Bacon Air Lift Co., New York, N. Y.: "Both our foreign and domestic business has increased this year, although not very perceptibly over last year. We were fortunate in securing considerable stock, so that the scarcity of material has not bothered us as much as it might have, although, of course, we have felt it to more or less extent. There is no question as regards the business situation of the country today, and in the iron business it certainly is almost impossible to get any deliveries on time. We just finished up a contract where we are furnishing a water supply obtained from artesian wells for the State of Connecticut for their camping-ground, and in this work we installed all the wells, laid all the pipe, etc., and had water running through the mains within thirty days after we started work. We are also just completing a 1,000,000-gallon plant for the State of New York for the Long Island State Hospital at King's Park, and for this

also we took the whole work of installing the wells, laying the pipe, installing the necessary pumping machinery and turning it all over in working order. These two jobs we guaranteed the water supply, which is the way we like to do business in this large work if we can. We are very busy on a number of other contracts, and have just obtained the contract for an air-lift system at Cheboygan, Mich., and have just completed an air-lift plant for the city of St. Johns, Mich., and we have lots of work on hand."

Looking for a Hero.

Peden & Co., American woven-wire fencing, Houston, Texas: "Our records for the first six months of the year show a handsome increase over the corresponding period last year. We are not manufacturers, but jobbers, and are carrying approximately the same stock in tonnage as in the past, but, of course, on account of advancing markets its value is considerably greater. While the unprecedented and disastrous floods in the Brazos valleys wrought great damage, we look for continued activity and prosperity for the rest of this year. One thing can prevent it, however, and that is continued low prices of cotton. The hope and salvation of this section of the country is in increased cotton values. The individual, company, corporation or whatever combination of brains that devise a practical plan by which the Southern farmer will get more money for his raw products, especially cotton, will be the hero of the age. Dewey won't be in it! We do but little foreign trade, securing orders occasionally from Mexico."

Thorns Among Roses.

C. Wilford Peters, successor to Shearer-Peters Paint Co., Cincinnati, Ohio: "Our business during the past two months, both home and foreign, has increased over 400 per cent. over any previous two months in the history of our business. The future prospect is bright indeed, though there will have to be considerable betterment in collections than we have experienced during the present season before we can report absolute improvement in a general way. The increase in our business is accompanied by an unusual tardiness in settlements, but we confidently look for a change in this respect."

Many Advance Orders.

C. W. Bender, secretary Wilson Laundry Machinery Co., Columbia, Pa.: "Our orders are two months ahead of our production at this time. We are carrying 25 per cent. more raw material now than we ever did before. Our business is 75 per cent. larger than last year or any former year. We look for continued activity in our line for some time to come. We are catering to foreign trade more than ever, but of course protecting our home customers first."

Demand Ever Increases.

Francis R. Stoddard, treasurer Sherwood Manufacturing Co., injectors, lubricators, etc., Buffalo, N. Y.: "We note a constantly-increasing demand for goods of our general line. We find that in the past few months we have shipped from 30 to 40 per cent. more goods than last year or the year before, and that we are taking orders several weeks ahead of our facilities for producing. We are carrying about the same stock as heretofore, both in raw material and finished goods, but find no difficulty in procuring our stock, which is largely copper and brass, as our wants require. There is no doubt the present demand will continue for at least next year, and enquiries from foreign countries continue to increase in number and our exports have been much more than in previous years. The record of our own business shows that we have

been compelled to enlarge our factory space and increase our facilities by adding much new machinery, and American manufacturers are much more inclined to buy the best article of its kind, and are not looking so much for cheapness as they are for the best in quality."

Ordering Far Ahead.

Prentiss Tool & Supply Co., New York, N. Y.: "We have found the condition of trade to be very good, there being a good demand for all sizes and styles of tools. We have found it somewhat difficult to obtain quick deliveries, and we are obliged to order away ahead to keep our stock intact. We think from the present condition there is no reason why there should not be continued activity for some time to come."

Despite Calamity-Howlers.

A. H. Andrews, the Morton patent moist-air down-draft dry-kiln, Chicago, Ill.: "We are happy to state that, in spite of 'calamity-howlers' early last spring (and every age has its prophets of evil, never so happy as when miserably happy, who seek another wailing place as soon as the skies clear about their present one), conditions of trade in our line have been steadily improving for the past year. We discover a straight gain of 25 per cent. in our several departments over the sales of last year, and every year since 1895 our books have shown substantial improvement. We have been six weeks behind our orders since early spring in our metal furniture and bank and office fittings, whereas in opera chairs and school desks, judging by sales up to date, we expect to exceed 100,000 this year, and if so it will be one-fourth of the entire output of the country, as nearly as can be approximated. We don't do a large foreign trade; the home market absorbs our output. We do look for continued activity and prosperity in many lines besides our own. We recommend anti-expansionists to put their 'sackcloth and ashes' behind them and get down to the business of cultivating the trade in our newly-acquired territory, and so do the greatest good to the greatest number."

Distrust Now Dissipated.

H. F. Cook, the Cook Well Co., St. Louis, Mo.: "We have found in the last two years, and especially of this year of 1899, a very marked degree of activity in our line, namely, of contracting for water supplies and furnishing material for same, than we have experienced since the year of 1892. The demand for our class of work, namely, the procuring of water supply from artesian or driven wells, has been very marked in the past eight months. There has not been a time since last April that we have not been compelled to delay work on account of having our whole force of experts engaged, and our inquiries at the present time will more than keep us busy during the balance of this year. We are just about completing a 5,000,000-gallon water supply for the city of Montgomery, Ala., the work consisting of eight-inch wells of an average depth of 450 feet, and we have just completed for the Kansas City, Memphis & Birmingham Railroad a well in Gattman, Miss., to a depth of 623 feet. In Arkansas and Tennessee especially has our line of work been very much in demand, and when people understand the good results that can be obtained from the deep or artesian-well system we think there will be a great deal more of it done. In the West, particularly Kansas and Nebraska, we have in former years done a great deal of work, but in the years 1894-95 and 1896, from some cause, we suppose other than financial panic, due perhaps to the question of finance involved in the last election, deterred capitalists from investing in the bonds of

these small municipalities in the West. However, we find that the distrust has been dissipated, and there has been numerous calls for new work. Our foreign trade has been restricted to England and Holland, and has consisted chiefly in furnishing our patent brass-tube well-strainer for small water works in those countries, although we have shipped through the Stover Manufacturing Co., Freeport, Ill., an order of well material to go to Russia."

Cotton-Mill Building.

Earl & Wilson, Gastonia, N. C.: "Business is in general as good as for same period of last year, and in the establishing of cotton mills more active than for a number of years. In the western counties of this State the lumber interest is very active, and good prices prevail for the finer grades of lumber. In parts of this section the drouth cut short the early corn, but recent rains has improved greatly the prospects of cotton and the later crops, so that on the whole the prospects are fair."

BUYERS CHANGE FRONT.

Values Still Rise Under Active Demand at Birmingham.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., August 24.

The market was full of life the past week. The soil-pipe interest came in and took 30,000 tons, part of it at an advance. One order at close of week was for 12,000 tons, distributed over 1900, the delivery being for 1000 tons each month. Those who thought when market was lower that prices were too high now concede that the situation justifies current values, and have been buying. There seems to be a change of front on the part of buyers, and this has caused an active demand and a rise in values. It is accompanied by no excitement whatever, and there is but little haggling over price. One order came for a mixed lot of No. 1 foundry, No. 1 soft and No. 3 foundry, which the seller did not care for, as deliveries commenced this year. So he priced the higher grades at \$17 and the No. 3 foundry at \$15, both cash and draft with B. L. attached. It was accepted. Sold in regular way the prices would be \$17.45 and \$15.45. On one grade shipments are to commence in September, on the others in November, and continue into 1900. Gray forge sold at \$14. It is quoted at less, but it is a chance shot that bags it at less than \$14. As No. 3 foundry has sold at \$15, it is unsafe to quote it at less. Basic iron sold at \$15.50, and the demand for it is unsatisfied. The sales of this grade could be largely increased without crowding the market if it could be supplied. No. 2 foundry sold at \$15.25 and \$15.50, but as lower grades are crowding that price, \$16 is now the proper quotation for it. For No. 1 foundry \$17 is a conservative quotation, and silver gray is \$18. The soft grades are the same as Nos. 1 and 2 foundry. One will notice irregularity in grade prices, and anticipating criticism of prices above given, attention is directed to basic iron. That grade usually ran along with gray forge. It is now \$1.50 to \$1.75 above it in price, and holds a place close to No. 2 foundry. This is in accord with the inexorable law of supply and demand. No. 3 foundry has crawled up nearer to No. 2 foundry also, thus showing where the demand has been most active.

The export demand is nominal. Room has been offered at decreased prices, but none has been reported as taken save one lot of 2000 tons at \$3.25 to Liverpool. Only last month 10,000 was taken at \$3.70 by one shipper. The lowest that has prevailed was \$3. That taken the past week was for a sale made over sixty

days ago. There is no let-up in shipments. They continue and will continue for months to come as heavy as facilities permit. Some iron, say 1500 tons, has gone into warrant yards. But there is no significance to be attached to that. Some iron is coming out all the time, and the stock there is yet on the decrease. It has reached so low a point that further decrease must be at a slow rate. It is understood that the Republic Iron & Steel Co.'s improvements will include the erection of two new furnaces at Thomas and a steel plant and betterments at both rolling mills. The mills have more orders than ever before in their existence, and are running all lines as full as they can. Plans are making to start the Bessemer rolling mills without delay. There is a fine opening here for a plant that will make steel castings, and also for mills that will turn out spiegel and ferro-manganese. In these fields there is, so far, no gleaner. Col. A. M. Shook at Ensley could give all necessary information. Negotiations are on foot covering all the idle furnaces in the district, with a view of resumption of work by them.

Active operations have commenced at Ensley City towards laying off and building that place according to a harmonious plan that anticipates a large and rapid growth. The president of the Ensley Land Co. has taken personal direction of affairs. Actual and anticipated demands at present require the building of 1500 to 2000 houses. Dwellings for the operatives of the large plants soon to be in operation there must first be erected, to be followed by those for other classes that make up a city. Baltimore money has been invested in the suburban town of East Birmingham, and 200 houses will be erected on the tract at an early date, and more added as demand justifies. Out at or near Gate City another addition is contemplated as soon as certain encouragement justifies. Then, with the reorganization scheme of the Elyton Company concluded, another Richmond will enter the field in the line of improvement and providing for the anticipated increase in the population. As it is, no sooner is the foundation of a house laid than applicants are eager to engage it when finished. Rents have so increased that tenants are compelled to accept terms, for vacant houses are not to be found. In the building line carpenters, masons, painters all are full of work. There isn't an idle mechanic in the district who is able to work who is idle for lack of work offering.

Secretary J. B. Gibson of the Commercial Club has compiled statistics showing that new industries put into operation or in course of construction in the Birmingham district during the year ended July 1 represented \$3,600,000; improvements being made by concerns already established, \$935,000; new houses completed or in course of construction, \$474,900; a total of \$5,009,900. J. M. K.

Eastern Iron Markets.

[Special Cor. Manufacturers' Record.]
Philadelphia, Pa., August 22.

The iron and steel situation is approaching a crisis. Prices of pig remain about where they were last week, but billets are quoted today at \$40, and other forms of steel are higher. Everything points to higher prices. The market requirements are still in excess of supplies, present or prospective. Iron makers confess they don't know which way to turn. Buyers are determined to place orders for best delivery. Within a week orders have been placed for deliveries twelve months hence. This looks like wild management, but it is the act of prudent and level-headed men.

One leading firm has succeeded in doing considerable business in Alabama irons. Several thousand tons were sold. Pennsylvania irons are quiet at about last week's quotations. Brokers say that three out of five consumers would buy more iron if they could.

The advance of steel billets to \$40 was a surprise to all. A number of Eastern consumers want to buy, but cannot. They will soon be in a hole. The mill men are indifferent. Prices will go higher.

The bar-mill interests, being oversold so far, are in poor position to make prices on car builders' requirements. Large quantities are wanted; price, 2 to 2.20. Common iron is worth 2 cents.

The merchant mills are unable at present to give much attention to recent inquiries for winter supplies in the East. All consumers will want material. The past three months have been busy ones in shops using merchant steel, and all want more material.

Sheet-iron makers enter the autumn month with a great deal of business on their books.

Pipe and tube makers have had offers once more from Western buyers, and will probably accommodate them.

The plate mills are, if anything, worse off than ever. Their old customers are crowding them for deliveries, and new customers are bidding for material. Quotations don't mean much. The Japan order for 75,000 tons taken by the Pen-coyd people will be executed in part this fall. Constructing engineers are figuring on big enterprises for railroads, ship-building companies and large interests. Shapes have advanced to 2¼ to 2½ cents.

All our old-time rolling mills are now at work excepting three or four, which are being put in shape for work.

The Cramps have had to drop a thousand men for a while, until Pittsburg sends the iron. Some bridge engineers are in trouble over the discovery of the fact that they cannot have iron on time. As matters stand today there will be an advance in material all along the line in September.

Reports from rail mills show a good run of generally small orders. Prices have advanced, in sympathy with billets and slabs.

There is a fresh effort being made to induce a number of railroad companies to part with their old iron rails, but they do not care to. Old iron rails are now \$22 to \$22.50.

The outlook is for an extraordinary demand for material in every branch of the iron trade. Our machinery plants are all very busy, and double time in some branches is required. The Baldwin Locomotive Works is turning out more engines than ever before in its history. Critical times are ahead. There are more evidences of famine conditions, but all concerned hope that this great danger may be averted.

For Timber and Ore.

[Special Cor. Manufacturers' Record.]
Bristol, Tenn.-Va., August 22.

The Holston Valley Railroad Co. began laying track Saturday on its three-mile extension from Big Creek Park to Fish Dam. The Empire Lumber & Mining Co., A. J. Dull, president, is advertising for bids to September 1 for the removal of earth, rock, etc., and building of bridges and trestling on ten to twelve miles of narrow-gauge road from Fish Dam into Shady Valley, Tenn.

The Western Union Telegraph Co. is building a new line from Bristol to Elizabethton via the Virginia & Southwestern Railway, a distance of twenty-two miles.

COMMERCE.

This department is devoted to a record of the rapidly developing commerce of Southern ports.

WHEN THE CANAL IS BUILT.

How American Trade Will Be Largely Increased.

A map of America, showing the transportation routes of North, Central and South America, just issued by the treasury bureau of statistics, gives some interesting data on the relative distance between the commercial centers of the United States and those of other parts of the world via the various existing and proposed water routes. It shows especially the routes followed by steamships in the commerce between the Eastern and Southern ports of the United States and of Central and South America, and the western coast of the United States. The contrast between the distances now traversed in commerce of eastern United States with western coasts of America and those which would be made practicable by an isthmian canal is interesting. The fact that the Isthmus of Panama lies almost directly south of the Atlantic coast ports, and that all commerce for the western coasts of South America must now travel eastwardly a distance of over 2500 miles and again back to the west a like distance before reaching the western coast of South America indicates in some degree the loss of distance and steam-power which must be utilized in reaching the western coast of South America, contrasted with that which will be practicable should a water route be opened across the isthmus. From New York to Valparaiso, on the western coast of South America, via the Straits of Magellan, is shown to be 8460 miles, while via Colon and Panama it is but 4572 miles; while from New York to San Francisco via the Straits of Magellan is 13,000 miles, while via Nicaragua it is 4867. The commerce of the west coast of South America, as shown by the publication of the bureau of statistics which this map accompanies, now amounts to over \$100,000,000 annually, and of this sum but \$15,000,000 is with the United States. The imports of Chili, Peru, Ecuador and Bolivia amounted in 1897 to over \$50,000,000, and of this amount less than \$5,000,000 was from the United States. Thus in that part of the commerce in which the United States producers and manufacturers are most interested, the export trade, the United States now obtains less than 10 per cent. of the trade of the Pacific coast of South America.

Grain at New Orleans.

The lease by Chas. F. Orthwein & Sons of elevators A and B at Southport, La., the property of the Illinois Central Railroad, will make the firm the leading grain exporters of the South, according to the New Orleans Times-Democrat, which says, in addition:

"The firm was originally Charles F. Orthwein & Sons, but upon the death of the head of the house, last April, it assumed its present designation. Its places of business are at present at St. Louis, Kansas City, New Orleans and Galveston, but, as before stated, it is generally understood that the acquisition of the Southport property will practically effect a consolidation of its operations at the last two ports and concentrate its grain trade in this city. The exclusive control of the two large elevators is undeniably an advantage, and is estimated by well-posted grain men at as much as a cent a bushel.

"The general status of the export grain

business at this city is decidedly encouraging, and the outlook is gratifying in the extreme. Two years ago New Orleans stood second on the list of cities in regard to the number of bushels handled, but last year it dropped to third, taking position behind New York and Baltimore. This year there is every indication that it will be first. There has been some shortage in the wheat crop throughout its tributary belt, but this will probably be made up from other points, and the yield in corn and oats has been very large. The probability is that there will be from one-third to one-half more corn handled here than last year.

"In this connection it is gratifying to note that there has been also a distinct advance in the quality of New Orleans export grain. The large driers that have been put up at elevator C, at the foot of Poydras street, and which are open to all, have enabled the shippers to put a great deal of corn in first-class condition that would otherwise have gone out in one of the lower grades. It may be that New Orleans will stand first this year in both quantity and quality."

Expected Grain Movement.

Messrs. Robert McMillan and John C. Fears, representing the New Orleans Board of Trade, have been in St. Louis to study the details of the present wheat crop, with the idea of establishing grades in accordance with the average quality of the crop. They also visited Kansas City for the purpose of getting in line to catch the large export business in grain for New Orleans. Mr. McMillan said that the export business this year will be a record breaker, and that if the crop turns out as is expected, the facilities for handling grain at New Orleans will be taxed to their utmost capacity.

New Galveston Lines.

Mr. Daniel Ripley of Galveston, who has been abroad in the interest of that port, has, according to a dispatch from New York, induced the establishment of the Houston Line between Galveston and Liverpool, making semi-monthly trips, and has made arrangements with a Cardiff firm to send sufficient of their twenty-four steamers to make regular sailings from Galveston to Havre during the cotton season.

Jottings at the Ports.

Charleston has now a channel to the sea of twenty-six feet at high water.

From Ronceverte, W. Va., part of a herd of 1700 head of cattle have been shipped for export.

The steamer Ethelwalda loaded last week with 120,000 bushels of grain, 5500 of them in sacks, in thirteen and one-half hours.

Fincken, Jordan & Co., it is announced, will operate a schooner line between Charleston, S. C., and Cuba at regular intervals, the first vessel having already sailed.

It is expected that the West India & Pacific Steamship Co., which last season loaded eighteen vessels at Galveston, will increase the number of its vessels running from that port this season.

The survey of the Goodyear dynamite work on Brunswick (Ga.) bar to secure a depth of twenty-five feet, a width of 200 feet and a depth of twenty-five feet with a width of 100 feet, is to begin shortly.

Several new steamers have arrived on their maiden voyages at Galveston since the opening of the grain season. The latest, the British steamer Shandon, loaded 192,000 bushels of wheat for Rotterdam.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

LITTLE ROCK'S ADVANCE

Contemporaneous with a Support of Railroad Building.

[Special Cor. Manufacturers' Record.]

Little Rock, Ark., August 19.

No section of the United States is at this time more rapidly changing its commercial and industrial condition than Little Rock and Central Arkansas. The great evolution is due entirely to the era of railroad building recently inaugurated. For many years this city has had virtually but one railroad system, consequently whether freight rates were reasonable or not, there has been no desire on the part of industrial concerns or large commercial houses to locate here. The transportation situation has been dominated by the Gould interest. True, we had the Iron Mountain north to St. Louis and south to Texarkana, with its branches, also the Little Rock & Fort Smith road and the Little Rock, Mississippi River & Texarkana Railroad, but they are all a part of the Missouri Pacific system. We also have a branch from the main line of the Cotton Belt, and this also is a Gould road. In addition, we had during all these years since the seventies the Little Rock & Memphis Railroad, running from Memphis to this city. It was hammered and knocked about until it virtually could not be made to pay operating expenses.

Something like a year ago Mr. Henry Wood of Philadelphia, who was at one time superintendent of the Little Rock & Fort Smith road, and later took charge of the Choctaw, Oklahoma & Gulf Railroad, running from Wister Junction west, notified the leading business men of this city that if he could secure the co-operation of the people, and that if public sentiment warranted the movement, he would undertake to secure the Little Rock & Memphis road, build in the gap between this city and Wister Junction, some 150 miles, thereby making a trunk line from Memphis to Weatherford, Oklahoma, a distance of about 550 miles. Our citizens took to the matter in the most enthusiastic manner and subscribed to the work a bonus of \$100,000, in addition to another bonus for the railroad shops. Construction on the railroad began about a year ago, and it has been pushed very rapidly, the rails already being laid on more than half the distance between Wister Junction and Little Rock. Tracklaying is now progressing very rapidly with large gangs of men at both ends. In this city, where the track enters from the west on the south side of the river, it makes a complete belt around the city, affording splendid sites for factories, and crosses the Arkansas river in the eastern city limits on a magnificent steel bridge now being erected and to cost \$150,000. The passenger station, of brick and stone, will be built in the eastern part of the city, and the plans are now completed. The country between this city and the Indian Territory, which will be opened by this road, is now without railroad facilities. It is of unparalleled richness in an agricultural way, and for many miles is an unbroken and undeveloped coal field, the coal being of the semi-anthracite character, almost smokeless. This new country is teeming with prospectors and new towns and cities are springing up like magic.

The second new railroad, to which our people gave a bonus of \$30,000, is the Little Rock, Hot Springs & Western, to be built from this city to Hot Springs, a dis-

tance of about fifty miles. The president of the company is Col. S. W. Fordyce, one of the coreceivers of the Kansas, Pittsburg & Gulf Railroad. This line will be the short road to Hot Springs, is absolutely independent of any other railroad, and it will no doubt be operated in a friendly way with the Choctaw. After the company was organized, it bought from the United States Court receiver the grade of the proposed road from Benton to Hot Springs, and the contract to place this grade in readiness for the steel was awarded to Peter Cassady, a railroad contractor well known in the Southwest. Henry G. Fleming, formerly general superintendent of the Cotton Belt route, is chief engineer of this line, and he will at once let contracts for the construction of the road covering the twenty-three miles between this city and Benton. The entire line will be completed and in operation within less than one year. The steel and the rolling stock is already purchased.

This brings us up to the Arkansas Northern Railroad, which our citizens have now taken in charge, the Board of Trade having guaranteed to this road a bonus of \$100,000. It is backed by a New York syndicate, which on investigation has proven to be thoroughly reliable. In fact, it is understood that this line when completed will be operated in connection with the St. Louis & San Francisco Railroad. It will be 212 miles in length, running from this city north through the counties of Faulkner, Cleburne, Van Buren, Newton, Searcy, Marion and Boone. This section of the State has heretofore been known as the largest area in the United States without a railroad. There are towns in this section from which the nearest railroad is seventy-five miles. It is known as the mineral region of Arkansas, being especially rich in zinc, lead and marble. The building of the line will make Little Rock the nearest zinc-reduction point in the United States to which ore can be shipped to meet cheap coal. The road will cross the Boston mountains at an elevation of 1500 feet on 1½ per cent. grade. The highest point on the road is Blue mountain, in Boone county, 2200 feet. Marshall, the county-seat of Searcy county, is 1036 feet above tidewater. The only rivers in the section are the White and Buffalo, the latter being navigable only at certain seasons of the year. A word now in regard to the resources of the respective counties will be of interest. Faulkner county is generally an agricultural region. Cleburne county is agricultural and has a large undeveloped coal area. The same can be said of Van Buren county. Newton county has a large zinc area and very fine timber lands. Searcy county is rich in marble, zinc and copper. Marion county has the largest zinc fields known in our country, and onyx is found in abundance. In Boone county we have a fine agricultural country, and it is rich in lead and zinc. All this undeveloped region embraces an area larger than Rhode Island and Connecticut combined—6000 square miles. The crops of this country are the same as in Illinois, the altitude giving latitude. The plateaus are veritable fruit gardens, it being from this section that the fruit was obtained which in years past was awarded the premiums at New Orleans, Boston and Riverside, Cal.

This great railroad movement has caused a marked increase in business of all descriptions in this city. In fact, Little Rock is making an evolution from a small city to a great metropolis. A year ago there were vacant stores and residences. Now there is no vacant edifice of any sort in the city. New industrial plants and new mercantile houses are

opening up continually in Little Rock. One factory alone, which will manufacture furniture, wagon material, etc., is now being erected and will employ 300 hands. It is understood that later in the season the New Orleans & Northwestern Railroad, which is now in operation from Natchez via Rayville to Bastrop, La., and which is owned by Charles Hyde of Plainfield, N. J., will take steps looking to extending the line to Little Rock. This enterprise when presented will receive the proper and necessary encouragement from this city.

GEO. R. BROWN.

Birmingham & Huntsville.

Mr. N. F. Thompson, secretary of the Huntsville (Ala.) Chamber of Commerce, is losing no opportunity to advocate the building of a direct railroad connection between Huntsville and Birmingham. At Birmingham the other day he said that the two cities could of themselves build the connecting link of thirteen miles between Oneonta and Huntsville if the railroads interested in the two cities will not undertake it. The Birmingham News announces that a joint meeting of representatives of commercial bodies of Huntsville and Birmingham will soon be held in the latter city, and adds:

"The Huntsville branch of the Birmingham Mineral, owned and operated by the Louisville & Nashville Railroad, extends from Birmingham to Oneonta. This branch, which was originally intended to go to Huntsville, can be built from Oneonta to Guntersville at a comparatively small cost, as the estimates show. Preliminary surveys have already been made and the rights of way obtained, so that little remains to be done to complete this very important link. At Guntersville, which is only thirty miles from Oneonta, connection is made with the Nashville, Chattanooga & St. Louis Railroad for Huntsville. This road at present is crossing the Tennessee river by ferry from Guntersville to Whitesburg. There is a contract between the Louisville & Nashville and the Nashville, Chattanooga & St. Louis roads for the construction of a joint bridge over the river so soon as the Louisville & Nashville builds to Guntersville. The completion of this link of thirty miles and the building of the bridge are all that are needed to bring Birmingham and Huntsville within 100 miles of each other. Birmingham has much more at stake in this matter than Huntsville, although the latter has taken the initial step in the movement to secure better railroad connections between the two cities. With our large industrial population we should get as close as possible to the granary of the South, which is undoubtedly the Tennessee valley, in order that the products of that favored region can be brought here at lowest cost, while at the same time placing our goods and products within close reach of the northern tier of Alabama counties. The completion of this road is especially important to the development of Birmingham's jobbing trade, and the movement should be pushed vigorously by the business interests of this city."

Value of a Railroad.

Commenting upon the advantages of railroad construction to a city Mr. Al. Schader, who is interested in many activities at Little Rock, Ark., said:

"I subscribed to the Choctaw road, and I do not regret it; in fact, I am very well satisfied with what I did. Every dollar I have subscribed has come back to me, and more, too, and it came to me on account of the construction of this road. The line is not yet completed, and yet I believe that since the work of construction began Little Rock has received not

less than a million dollars which otherwise would not have come here. Most of this money has been distributed among the people in this city. The contractors, merchants, manufacturers and wage-earners have all received their share of this million-dollar expenditure."

Raleigh & Eastern.

Incorporators of the new Raleigh & Eastern Railway Co., which is to build a road twenty miles long from Raleigh, N. C., to Wakefield or Earpsboro, have elected Julian S. Carr, president; N. W. West, vice-president, and C. B. Barbee, secretary and treasurer. Mr. Armistead Jones, one of the directors, is quoted to the effect that the road will be built at once, inasmuch as "no enterprise could be more certain of an early and profitable return. It will run into the finest timber forests to be found in this section, and will split wide open the richest and most prosperous agricultural district in the county." The stockholders have ordered immediate payment of the initial capital stock of \$25,000, that an engineer be at once put to work on the survey.

Tennessee Roads Object.

Nearly all the railroads of Tennessee have filed exceptions to the assessments made by the railroad commissioners for 1899 and 1900 on the ground that distributable property has been assessed at more than its actual cash value, and that the assessment of railroads has not been equalized with the assessment of other property in the State. The commission has decided that the exceptions should be overruled.

Railroad Notes.

The United Railways & Electric Co. of Baltimore has ordered fifty-five new cars.

The Atlantic Coast Line will build at South Rocky Mount, N. C., a hospital for its relief department.

Two thousand men are now employed in completing the Southern Alabama Railway from Pineapple to Repton, Ala.

The United Railways & Electric Co. of Baltimore is making improvements in roadbed and connections in the suburbs.

The Kansas City, Pittsburg & Gulf has ordered two eight-wheel passenger engines from the Baldwin Locomotive Works.

An organization of the stockholders of the Frederick, Thurmont & Northern Electric Railroad will be effected on September 2 at Frederick, Md.

It is announced that the Atlantic Coast Line will acquire from the Louisville & Nashville Railway Co. a half interest in its lease of the Georgia Railroad.

The Missouri, Kansas & Texas Railway reports a surplus of about half a million dollars for the year, nearly sufficient to pay 4 per cent. on the stock.

It is reported from Trenton, N. J., that the Pennsylvania Railroad Co. may construct a trolley line paralleling its main line between New York and Washington.

The broad-gauging of the Baltimore & Lehigh Valley Railroad for shipping coal and other freight will be extended to Towson, about seven miles from Baltimore.

Mr. J. B. McNeal has been promoted to the treasurership of the Baltimore & Ohio Railroad Co., in place of William H. Ijams, who has resigned after a service of forty-six years.

In anticipation of next month's grain movement the Baltimore & Ohio Railroad is endeavoring to secure more cars. It is estimated that the road could use 10,000 additional ones.

Reported improvements of the Rich-

mond, Fredericksburg & Potomac Railroad include the replacing of the bridge at Fredericksburg with a heavier structure, and wooden culverts with iron ones and the double-tracking of the line.

Major E. L. Bemiss has been chosen president of the Richmond (Va.) Traction Co., in place of Mr. E. Randolph Williams, resigned to devote more time to other interests, though he will keep in touch with the company as vice-president.

It is thought that a road eight miles long, which is to be constructed from Covington, Va., to ore properties on Potts creek by Gooch, Rinehart & Dennis of Staunton, may be continued to a junction with the Norfolk & Western Railway in Giles county.

It is reported at Port Arthur, Texas, that preliminary arrangements have been made for the construction of an air line from Houston to Port Arthur, to be completed in time to handle the cotton crop of next season for ocean shipment from Port Arthur.

It is rumored that the Seaboard Air Line has purchased the property of the Bradley Company, on the Ashley river, on the western water front of Charleston, S. C., which will be used for the construction of a terminal for the projected Chattanooga, Augusta & Charleston road.

The Galveston, Harrisburg & San Antonio Railroad Co. has elected C. P. Huntington, president; J. Kruttschnitt, first vice-president; C. B. Seger, secretary; B. C. Cushman, treasurer; Charles Babidge, assistant secretary and treasurer, and W. G. Van Vleck, second vice-president.

The total earnings during the last fiscal year of the West Virginia Central & Pittsburg Railway were \$945,192.25, an increase of \$56,896.58, and the expenditures were \$597,707.81, an increase of \$13,110.15. Shipments of coal from all mines along the road were 1,260,023 tons, and of coke 232,215 tons.

The purchasers of the Richmond Railway & Electric Co., organized as the Richmond Passenger & Power Co., to take over all the street railways in Richmond, Va., except the traction company's property, have petitioned the city council to adopt an ordinance defining the status of the company toward the city.

A dispatch from Martinsburg, W. Va., says that the formal transfer of the West Virginia & Pittsburg road to the Baltimore & Ohio Railroad will be made in September. In that connection it is reported that the Baltimore & Ohio will obtain control of the Monongahela River road, thus giving it a direct line from Pittsburg to Sutton and Camden.

According to a dispatch from Columbia, S. C., the Stewart Contracting Co. of that city has secured the contract for furnishing the granite required for the six piers of the Seaboard Air Line's bridge across the Congaree river, and to build the four piers of the bridge across the Wateree at Camden, the three of the Congaree piers and the two piers of the bridge at Smith's branch, north of Columbia.

Mr. J. A. Woodson, receiver of the Southwestern Arkansas & Indian Territory Railroad, which runs from Smithton to Pike City, thirty-three miles, writes to the Manufacturers' Record that if bonds for the purpose can be placed the road will be built west from Pike City fifty miles to DeQueen, on the Kansas City, Pittsburg & Gulf Railway, and east to Arkansas City, Ark., from Smithton 125 miles. He states that the net earnings of the present line are 5 per cent. of \$500,000. The road is advertised for sale in October.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

Contract Let for Olympia Cotton Mills

The contract was awarded during the week for the construction of the new Olympia Cotton Mills of Columbia, S. C., noted lately as perfecting organization and announced some months ago as to build a 104,000-spindle and 2600-loom plant.

Messrs. T. C. Thompson & Bros. of Birmingham, Ala., were the successful bidders, and the buildings will include a main structure four stories high, 151x553 feet, ceilings eighteen feet high; there will be four towers, two of them to be 140 feet high and twenty-five feet square, one to contain a clock with four illuminated dials eight feet in diameter, and the other to contain a 5000-pound bell, electrically connected with the clock, to strike the hours and mill calls.

In this main building will be placed the 104,000 spindles and 2600 looms for manufacturing print cloths, the largest equipment in any one building in the South. Back of the main mill will be an engine-house 110x50 feet, to contain three vertical cross-compound steam engines of 1500 nominal horse-power each, coupled direct to three 1300-kilowatt electric generators; the boilers will number twelve upright water-tube of 300 horse-power each. The nominal steam-power will be 4500 horse-power, but the actual power will be 6400 horse-power, enough to operate two other large Columbia mills, one of which intends to utilize the power. The company's president estimates that the electric power thus generated by steam will cost \$15 per horse-power per annum.

It will require about 12,000,000 bricks to construct this mill; its floor space will be more than eight and one-half acres; it will have an electric-lighting capacity of 5000 incandescent lamps, 1600 of which will be required in the spinning-room. There will be needed 1400 operatives, and 300 double houses will be erected, costing \$400 each, making a total cost of \$120,000. The contractors are to complete the main building by July next, at which time the instalment of machinery will be commenced. The engines, boilers and generators are contracted for delivery next May.

The Olympia Cotton Mills has a capital of \$1,500,000, and its president is Mr. W. B. Smith Whaley.

Earned 41 Per Cent. for the Year.

The year ending June 30 closed the business year of the Clover Cotton Manufacturing Co. of Clover, S. C. The net earnings for the period were \$36,940, or 41 per cent. on the company's capital stock of \$89,000. A cash dividend of 12½ per cent. was paid. When the company was first inaugurated (eight years ago) a policy was outlined that every dollar invested in the mill by the stockholders originally should be paid back in dividends before any enlargements were considered. With the year's profits referred to this result has been attained. The company will now make arrangements for trebling its plant, and has accordingly awarded contracts for the erection of a 10,000-spindle addition, which will be ready for operations by October 1. The

present equipment is 6000 ring spindles, producing hosiery yarns. Mr. W. E. Morton is superintendent.

Increasing to 10,000 Spindles.

The board of directors of the Gaston Manufacturing Co. of Cherryville, N. C., held their annual meeting last week. The reports of the management showed that a handsome profit had been made during the year. It was decided to double the plant, and it will accordingly be increased to 10,000 spindles and 350 looms.

Textile Notes.

Mr. E. L. Shuford of Hickory, N. C., is forming a company to build a cotton factory.

The Edgefield (S. C.) Manufacturing Co. is installing fifty new looms in its cotton mill.

Mr. J. J. Felder of Navasota, Texas, has undertaken the location of a 10,000-spindle cotton factory.

A Virginia woolen manufacturer and Mr. J. F. Kerner of Kernersville, N. C., will establish a woolen mill.

A \$200,000 stock company is projected at Athens, Ga., for the erection of a mill of 2000 spindles and 200 looms.

Mr. E. H. Shivey of Talbotton, Ga., is investigating at Barnesville, Ga., with a view of establishing a knitting mill there.

Mr. J. W. Cannon of Concord, N. C., and associates will establish a knitting mill at Albemarle, N. C., as stated last week.

Capt. William Hunter, Jr., of Central, S. C., is endeavoring to organize a company to build cotton factory; over \$50,000 has been subscribed.

Messrs. John H. Almand, J. J. Langford, R. W. Tucker, L. J. Almand and G. A. Almand of Conyers, Ga., are forming a cotton-mill company.

A convention of the commissioners of agriculture from the Southern States will be held at New Orleans on September 20 to consider the cotton situation.

Messrs. A. A. Shuford, G. H. Geitner, C. Geitner and C. H. Geitner of Hickory, N. C., are organizing a \$50,000 stock company for the erection of a cotton factory.

A charter has been issued to the Terra Alta Woolen Mill Co. of Terra Alta, W. Va., the capital being \$1000. The incorporators are Messrs. John D. Rigg and others.

Mr. J. A. McKinstry of Wyeth City, Ala., is interested in the proposed formation of a cotton-mill company; information is wanted, estimates on machinery, etc.

A charter has been granted to the Hogansville Manufacturing Co. of Hogansville, Ga., for the purpose of erecting a cotton mill, with capital stock of \$75,000.

Mr. Howard Sykes of Cronly, N. C., is endeavoring to organize a company to build a 5000-spindle cotton factory for producing yarns. More than \$25,000 has been subscribed.

Mr. Thomas K. Huges of Easley, S. C., contemplates engaging in the manufacture of bobbins and shuttles. Prices and information on the necessary machinery are requested.

Mr. J. J. Littlejohn of Jonesville, S. C., is interested in the proposed erection of a cotton factory at Sherman, Texas, as reported last week, but nothing definite has been done in the enterprise as yet.

Mr. W. J. Hurlbut of Chattanooga, Tenn., land and industrial agent of the Southern Railway, has organized and located a cotton factory in West Point, Miss. The company will have capital

stock of \$100,000 and put in 5000 spindles.

It is proposed at Perry, Ga., to form a company to buy and remodel the idle Houston Cotton Factory at Dennard, Ga., near Perry. The mill contains eighteen cards, 2240 spindles, sixty plain looms, etc.

A movement is on foot at St. Francisville, La., for the organization of a cotton-factory company. Those interested include Messrs. J. B. McGehee, L. P. Kilbourne, J. F. Irvine, E. L. Newsham and W. B. Smith.

Mr. J. S. Hartzell of Mt. Pleasant, S. C., contemplates forming a company to build a factory for manufacturing spool cotton from Sea Island staple. Information and estimates on equipment of machinery are wanted.

The Progressive Union of New Orleans, La., is taking steps for the formation of a company to build a cotton factory. Messrs. W. H. Byrnes, S. Odenheimer, J. D. Blakemore, Tullis C. Walker and E. S. Rapier are interested.

A dispatch from Beaumont, Texas, states that Mr. Hamilton Myers of that city is in New York and has interested capitalists in the proposed cotton-mill company for Beaumont. It is said that a \$200,000 company will be formed.

It is proposed to organize a \$100,000 cotton-mill company at Canton, Ga., and subscriptions are now being solicited. Those interested include Messrs. A. T. Jones, Thomas Hutcherson, G. J. Teasley, W. J. Webb, J. E. Rudasill and others.

A movement is on foot at Hammond, La., for the formation of a cotton-mill company, and \$20,000 was subscribed the first day. Those interested include Messrs. W. E. Libby, E. W. Magann, W. R. Watson, J. W. Sentell and J. B. Adams.

Messrs. D. M. Baker, P. S. Baker, J. A. Durham, H. A. Klueppelburg and C. Valaer of Kings Mountain, N. C., have incorporated the Lula Manufacturing Co. for the purpose of erecting a cotton mill. The capital stock is \$100,000, with privilege of increasing to \$200,000.

The Paragon Mills, the Cedartown Cotton Manufacturing Co. and the Southern Extension Cotton Mill Co., all of Cedartown, Ga., will combine as the Cedartown Cotton Co. and largely increase and improve the combined plant. A new bond issue will be made.

Mr. D. A. Tompkins of Charlotte, N. C., president of the High Shoals Co., recently reported as organized to build factory, writes that the company will build a structure three stories high 100x400 feet and place 5000 spindles to start with, increasing same until 12,000 are in place.

The Selma (Ala.) Cotton Mills was sold at public outcry on August 21. The purchaser was Mr. Adam Glass of Mobile at his bid of \$62,100. The judgment amounts to \$51,000. Mr. Glass is interested in other mills in Alabama, and doubtless intends to arrange for putting this plant in operation.

The Pocahontas Mills of Petersburg, Va., is now building an addition three stories high, 53x70 feet, in which will be placed 1500 spinning spindles, a 72-spindle 12x6 slubber, 120-spindle speeder, 100-spindle spooler and other machinery. Order for the new equipment has been placed with New England shops.

Mr. John H. Hays, chief engineer of the Erwin Cotton Mills Co. of Durham, N. C., is making surveys and estimates preparatory to the construction of a dam and canal in Chatham county, North Carolina, to develop water-power for the large mill which the company will build; recently the company bought 1000 acres

of land and water rights to facilitate its purpose in this connection.

The Cumberland Cotton Mills Co. of Cumberland, N. C., reported last March as incorporated, is now equipping its mill. The plant will be fitted with about 4000 spindles, power, etc., for the production of 8s to 12s coarse yarns, using 3000 pounds of cotton daily. Mr. S. H. Cotton (formerly of Hope Mills) will be superintendent.

The new Windemere Knitting Mills of Albemarle, N. C., reported last week as to be established, is now erecting its two-story 75x100-foot building, and will install machinery for a weekly capacity of 6000 pairs of hosiery and employing 300 operatives. The capital stock is \$30,000. Messrs. Webb & McGill and J. W. Cannon of Concord, N. C., are the owners.

It is reported that the Massachusetts Mills in Georgia of Lindale, Ga., will double its present 30,000-spindle and 1132-loom plant, entailing an expenditure of about \$1,000,000. Mr. Edward Beach, agent of the company at Lindale, writes the Manufacturers' Record that he does not care at present to make any statement regarding published announcement of the duplication of present plant.

The company reported several months ago as forming to remodel and operate the old Quitman (Ga.) Cotton Mills has organized as the Atlantic & Gulf Mills, with capital stock of \$100,000. Messrs. J. W. Spain, J. W. Oglesby, R. C. McIntosh, J. O. Lewis and C. T. Tillman compose the committee to examine bids on machinery. Yarns will be manufactured. J. W. Spain is heading the enterprise.

Mr. N. F. Thompson, secretary of the Chamber of Commerce of Huntsville, Ala., has returned from a trip to the New England States, partly for the purpose of interesting Northern cotton-mill companies in Huntsville and the South as a site for branch cotton factories. Managers of four mills, in Boston, Fall River, Hartford and Lowell, stated their intention to send representatives to Huntsville within thirty days to investigate.

The mill proposed at Mt. Pleasant, N. C., as reported lately, is now assured. The company has been organized as the Tuscora Cotton Mills, with capital stock of \$35,000, and has privilege of increasing to \$100,000. Mr. J. W. Cannon of Concord is president, and Paul Barringer of Mt. Pleasant, secretary-treasurer. The directors are Messrs. L. J. Foll, A. N. James, Capt. Jonas Cook, D. D. Barrier and J. F. Eford of Albemarle, N. C.

The cotton-mill company forming at Covington, Tenn., as reported lately, will be known as the Tipton County Mills, and charter will be applied for immediately. The capital stock will be \$100,000. Those interested include the principal parties, Messrs. J. C. Boals (temporary president), H. W. Lynn (temporary secretary), J. H. Flipping, W. V. McFadden and G. B. Gillespie. A committee was appointed to select site and arrange for plans, specifications, estimates on machinery and other particulars.

Messrs. George T. Walker and J. J. Miller of Arlington, S. C.; J. L. Sexton and O. A. Robbins of Charlotte, N. C., and A. B. Grace of Duncan, S. C., have incorporated the Arlington Cotton Mills of Arlington, S. C., with capital stock of \$50,000. This company has secured the old Walker & Miller mills, and will improve and operate same. There will be erected an addition 100 feet long, in which will be placed 3500 spindles and 200 looms additional. Present mill has 1900 old cop spindles and thirty-six looms, producing osnaburgs and yarns. Mr. George T. Walker will remain superintendent.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

The Market for Cottonseed Products.

New York, N. Y., August 22.

No new feature presents itself in the cotton-oil market, although conditions referred to in our recent reports have become more pronounced. An active export trade prevailed for a few days, but that side of the market has again slowed up. Holdings are firmly held, with little on offer. With regard to stocks, it is well known that one concern controls practically what is yet available, a condition of affairs which, while removing competition, enables prices to be fixed with a degree of security not otherwise obtainable. Lard is exhibiting more firmness, although the trade in compound lard seems to have relaxed considerably during the past week. Chicago lard, October delivery, is offered at 5.45 cents. Tallow is on the upward scale, prices at the moment being 4½ cents, Chicago, with the prospect of a further advance, due to a universal scarcity. Reports just arrived by cable from England are to the effect that tallow has been marked up 6s., due to the active demand and comparatively light holdings. Trading at the moment is light, and the disposition to wait still prevails. Small sales of new-crop oil are made on the basis of 25 cents for prime and 24 cents for off grade for October or later delivery. Bids, however, are generally 1c. under the market. For spot stuff holders are asking 26 to 26½ cents for prime summer yellow, and 25 to 25½ cents for off grade. New-crop oil, however, was sold early in the week in fair volume. Off yellow, November to March deliveries, have been contracted for on a basis of 22¼ cents, and winter yellow for same period at 28½ cents, a good demand prevailing for the latter. New crude is on offer from the mills at 17 cents, October shipments, with Western packers ½c. under in their bids. The hope of a large seed crop, with cheap new-crop oil, has something to do with the indifference which exporters exhibit in purchasing, seeing that foreign needs are but temporarily supplied. The following are closing prices: Crude, prime, 21 to 21½ cents; crude, prime f. o. b. mills, 15½ to 18 cents; crude, off quality, 19 to 20 cents; yellow summer, prime, 26 to 26½ cents; yellow summer, butter, 28 to 29 cents; yellow summer, off quality, 25 to 25½ cents; white summer, 30 to 32 cents; yellow winter, 30 to 32 cents; white winter, 31 to 32 cents, and soap stock, 75 cents per 100 pounds. The 1898-99 cottonseed-oil crop, now pretty nearly marketed, is estimated to have aggregated in the neighborhood of 1,500,000 barrels. While contracts have been made for heavy shipments of cake for the fall and winter seasons, the prospect of higher ocean freights has checked business, with the result that cake is lower. We quote Texas cake at \$17.25 to \$17.50 at Galveston and \$14 per ton f. o. b. mill.

Cottonseed-Oil Notes.

The Farmers' Cotton Oil Co. of Farmersville, Texas, has been incorporated, with a capital stock of \$60,000, to erect and operate a cottonseed-oil mill. The incorporators are Hugh Halsell, A. B. Scarborough and J. J. Culbertson.

The Moorhead Cotton Oil Mill Co. of Moorhead, Miss., was incorporated last week, with a capital stock of \$50,000, by C. H. Pond, E. A. Shedd, R. B. Mc

Mahon, H. A. Mulaly and others. The company has contracted for a 60-ton mill and the building of a refinery for treating crude oils. Mr. C. H. Pond is president.

It is stated that Lee Baggett, a practical oil man, formerly of Texas, but recently of Jackson, Miss., has purchased the old cotton factory property one mile north of Canton, Miss., and will proceed at once to put in a 50-ton cottonseed-oil mill, together with a complete system of gins and round-bale press. Mr. Baggett will push his enterprise, and expects to be prepared to crush seed by October 15.

The market for cottonseed products in New Orleans is quiet, as the season is now practically over, and those engaged in the industry are making arrangements for the business of the new crushing season. Dealers here report prices for oil nominally steady, with sales of off yellow for November-March f. o. b. here at 22½ to 23½ cents. Shipments of oil last week to continental ports amounted to 18,750 gallons, and for the season 15,143,300 gallons, against 7,922,150 for the season of 1897-98. Cottonseed meal and cake are quiet, with values steady. Receivers' prices are as follows, with quotations nominal: Cottonseed, \$9 per ton of 2000 pounds delivered here for good sound seed; cottonseed meal jobbing per carload at depot, \$17 per short ton of 2000 pounds; for export per long ton of 2240 pounds f. o. b., \$20; oilcake for export, \$20, new crop, per long ton f. o. b.; crude cottonseed oil at wholesale or for shipment, off crude, 10 to 15 cents per gallon loose f. o. b. tanks here; in barrels, 12½ to 17½ cents; cottonseed hulls delivered per 100 pounds, according to location of mill, 20 to 25 cents; linters, according to style and staple—A, 2½ cents; B, 2½ cents; C, 2½ cents; off refined cottonseed oil, 22½ cents for steamer.

Mr. Chas. C. Homer of Willis & Homer, solicitors, will, as receiver, sell at auction on September 5 next the established foundry, machine and boiler works, chattels, stock in trade, etc., of the Campbell & Zell Marine and Boiler Works of Baltimore. The sale will include all the leasehold property, together with the valuable patents, patterns, machinery, stock of boiler tubes, valves, pipe and fittings, propeller wheels, bar iron, pig iron and merchandise. In another column of the Manufacturers' Record are set forth particulars of the sale, with details of the property and material to be disposed of. Mr. O. A. Kirkland, the well-known auctioneer, will conduct the sale, which will begin at 10 o'clock in the morning.

The International Acetylene Association met at Chicago last week. Members were present from Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, Tennessee and Texas. The sessions were devoted principally to a discussion of technical and business points. All present concurred in the opinion that acetylene presented problems not lightly to be ignored, and not inviting investment or experiment by amateurs, as the industry is past the experimental stage. The association has twenty-eight members. The president is George L. Wilson of Chicago, and the secretary and treasurer is J. B. Carroll of Chicago.

The report of State Labor Commissioner Thomas P. Rixey of Missouri shows that last year's products of the State included \$7,553,984 worth of flour, \$644,918 of mill feed, \$10,079,079 of lead ore, \$4,618,162 of zinc ore, \$2,295,000 of coal, \$2,167,030 of pig lead, \$290,988 of iron ore, \$280,000 of nickel ore, \$559,030 of cement, \$4,156,498 of lumber, \$2,160,000 of cooperage and \$1,053,958 of cross-ties.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record,
Baltimore, Md., August 24.

The local lumber market continues to show many favorable conditions, and the volume of business in all lines continues to improve as the autumn season approaches. During the past week there has been a good inquiry from large buyers, and considerable lumber has been sold for near and future delivery. Prices, under the present state of the lumber industry, are advancing. The urgent demand existing, which, from all indications, will continue throughout the present year, and the shortage in stocks at all milling sections are likely to create an unusual season of activity. North Carolina pine men have a large supply of orders, sufficient to keep all the mills in the pine belt busy for three months to come. Rough and dressed lumber have scored an advance in the past week, and shipments are heavy, but are often retarded for want of vessels. In white pine the situation continues to show very satisfactory features; prices are firm, and stocks by no means excessive, while the demand is good from both local and out-of-town buyers. The movement in hardwoods is also quite active, receipts being more liberal, while as yet there is only a moderate stock of dried lumber on the market, receipts of green lumber being larger. A material advance is shown in the several grades of oak, poplar, ash and other woods. Foreign shippers of hardwoods view the outlook as encouraging, and with a moderate supply at ports in Europe prices are holding up fairly well. Shipments are not large, and exporters are not disposed to glut the markets abroad, thereby seriously affecting the trade on this side.

Norfolk.

[From our own Correspondent.]
Norfolk, Va., August 21.

So far this month the shipments of North Carolina pine lumber have been very heavy, and there seems to be no decrease in the demand from the usual sources. The lumber season of 1898-99 will close on the 31st inst., and the record of the year in all portions of the North Carolina pine belt, as well as throughout the whole country, has been characterized by some remarkable features. Values have continued to advance under an urgent demand from Northern and other domestic sources, while there has been a good inquiry from foreign markets. At the moment stocks are generally light, and in many cases it is difficult to fill orders promptly. At present prices the margin of profit is not by any means too broad, and at the end of a commercial year, when accounts are audited, books will show only an average profit for the year. The North Carolina Pine Association, which controls practically the entire output of yellow-pine lumber cut on this coast, met here on the 18th inst. and marked lumber up another notch. The price of 4-4 and 5-4 No. 1 was advanced 50 cents per 1000 feet; 4-4 and 5-4 No. 2 was advanced \$1 per 1000 feet, and 12-inch box lumber was marked 50 cents per 1000 feet over present quotations. The advance is to take effect at once. This advance is due to the urgent demand existing and to the fact that the supply is inadequate for present requirements. It is believed that a further advance will soon follow. Those engaged in the lumber trade of this port are

eagerly reaching out for new markets, and in a general way Norfolk is fast growing to be a most important commercial port. There is now loading here the steamship America, which will take a cargo of lumber to Jamaica. This is the first cargo of lumber ever loaded here for direct shipment, and is only the beginning of a very prosperous trade with the West Indies. Now that the Dismal Swamp canal is open, large quantities of timber will be received at this port by the various mills through this channel. The John L. Roper Lumber Co., it is said, telegraphed its agent at Elizabeth City, N. C., last week to ship raft of logs at once by Dismal Swamp canal, which will be the first shipment through that waterway for a number of years. Lumber freights are steady, with desirable tonnage scarce. Rates remain at \$2.50 to \$2.75 to New York and Sound ports, and \$3 to \$3.25 to Boston and eastward. The schooner Venus was taken last week to load lumber at Norfolk for Norwich at \$2.75.

Savannah.

[From our own Correspondent.]
Savannah, Ga., August 21.

Business in the various lines of the lumber trade of this port continues very satisfactory, and shipments during the week have been of the usual volume. Millmen are now very decided in their views, and will make no concessions from the price-list. A very large number of orders were received during the past week, and mills, both here and at adjacent ports, are all busy and running up to their full capacity. Shippers at Brunswick report business as booming just now; orders from Spanish ports are beginning to come to hand, and the large trade with Spain before the war shows evident signs of being renewed on an extensive scale. Prices for lumber at the close of business on Saturday were very steady at the following quotations f. o. b.: Minimum yard sizes, \$12.50 to \$14; car sills, \$13.50 to \$15; difficult sizes, \$16 to \$25; ship stock, \$25 to \$30; sawn ties, \$10.50 to \$11; hewn ties, 33½ to 36 cents. Reports from interior towns in the State are all very favorable, and show a remarkable volume of trade in wood products. Timber lands are being rapidly bought up by investors, and a most extensive development is now in progress throughout the Georgia pine belt. From the nearby port of Darien it is reported that the activity in all lines of the timber business is greater than for many years. Timber buyers are making large purchases at high prices, which prices are constantly advancing. Bids for dredging Doboy bar were opened today, and it is thought that work on the contract will commence at once. This will enable vessels of heavy tonnage to load at Doboy and will bring to Darien an increased amount of business in timber and lumber, as well as in other lines.

Mobile.

[From our own Correspondent.]
Mobile, Ala., August 21.

The commercial year is now drawing to a close, and the volume of trade in every line of the lumber and timber industry seems to show a material improvement as the season progresses. The demand for lumber is decidedly active, and from Central and South America, Mexico, Cuba and the United Kingdom and continental ports orders are coming in freely. Stocks of the various grades and dimensions at all mills are generally light. During the past week over 2,000,000 feet of lumber left this port, and for the season of 1898-99 the amount of lumber shipped to various ports will aggregate nearly 80,000,000 superficial feet. In the timber trade there is considerable

stir, and shippers are busy clearing vessels every week to some port in Great Britain and the Continent. The tone of the timber market is very steady, and for hewn timber stocks are light and prices firm at 13 to 13½ cents per cubic foot, basis of 100 cubic feet, average B1 good. Hewn poplar is in fair demand at 12 cents per cubic foot. There is a good demand for sawn timber at 12½ to 13 cents per cubic foot, 40-foot basis. Cypress logs are firm at 6 to 10 cents per cubic foot. Pine saw logs are selling at \$5.50 to \$7.50 per 1000 feet. The steamship Theodore H. Rand cleared last week for Havre, France, with 20,024 cubic feet of hewn timber, 41,919 cubic feet of sawn timber and 121,800 superficial feet of lumber; the bark Chamolus cleared for Buenos Ayres with 702,145 feet of lumber; steamer Columbia for Boca del Tora with 24,967 feet; schooner Beacham for Providence, R. I., with 140,000 feet; bark St. Mary for New York with 444,000 feet, and steamer Transit for Progreso, Mexico, with 208,570 feet. Lumber and timber freights continue firm as to rates, with a scarcity of desirable tonnage. Rates on lumber to the West Indies are quoted at \$8 to \$10; Rio Janeiro, \$16; River Platte, \$15, and coastwise, \$6.50 to \$8.50. The following charters were reported last week: Norwegian bark Lorenzo, 1160 tons, from Mobile to Buenos Ayres with lumber at or about \$13.50; bark Henrick Ibsen, 819 tons, from Pensacola to Buenos Ayres with lumber at or about \$13.50; schooner Elsie A. Baylis, 253 tons, from Pascagoula to Arroyo, P. R., with lumber at \$10.50 and port charges.

Beaumont.

[From our own Correspondent.]
Beaumont, Texas, August 21.

For a town of the size of Beaumont it is at present a hive of industry, and the improvements in various parts of the town during the present year are quite encouraging. In every line of business there seems to be a decided tone of activity present. The growth of the town in the past seven months is set forth in a report by Street Commissioner Millard, which shows that seventy-nine building permits have been issued since January last. This does not include repairs or building of outhouses, stables, etc. Of course, the leading industry here is lumber, and saw mills now are generally cutting all the logs they can, endeavoring to clean up their orders. Prices are very firm for all desirable grades of lumber, and at present figures the demand shows no decrease. Dealers seldom ask for concessions in price, but their one idea is to get the lumber as promptly as they can. Stocks of lumber are very low, there being very little dry stock to speak of, and while prices are well sustained, it is expected that at an early future date another advance in the price-list will be recorded. The business with interior points in the State is remarkably good, and increasing every week. The export business, while fairly active, is not what it should be, and scarcity of tonnage and uncertainty of arrivals of long-voyage steamers restrict trade to a great extent. Exporters, however, are handling all the lumber that the mills can furnish, and shipments show considerable increase during the last thirty days. Hardwood shippers are doing a good business, shipping through New Orleans and other points. It is stated that the firm of Goddard & Gilliland, who have arranged for a line of steamers from Beaumont to Europe, have just closed a deal with the general manager of the Port Arthur Channel & Dock Co. for two steamers a month. The Mediana, due last Sunday, will load a cargo of lumber for Rotterdam. At Orange the volume of business

in all branches of the lumber market has been very heavy, and all orders have been promptly filled.

Lumber Notes.

The Globe Furniture Factory at High Point, N. C., has installed additional machinery and will enlarge its entire plant.

A mill and factory will be established in Sanford, Fla., by C. W. Kennon of Tampa for the manufacture of a wood preservative from the palmetto tree.

Mr. Frank Pierce, who has been connected for a number of years with the Virginia Manufacturing Co.'s mills at Suffolk, Va., has accepted a position with a large lumber firm at Goldsboro, N. C.

The Cincinnati Barrel & Stave Co. of Cincinnati has purchased about 450 acres of timber land in Casey county, Kentucky. This company will move a large saw mill from Cincinnati to work up the timber.

J. Q. Morehead, president of the Wilson Aluminum Co., has contracted with a lumber company at Kanawha Falls, W. Va., to furnish 350,000 feet of lumber to be used in the construction of a dam above the falls.

The Kelley Improvement Lumber Co. was incorporated last week, with a capital stock of \$25,000. The home of this enterprise will be at Newport, Ark. The incorporators are Charles B. Kelley, president; Douglass Terry and James L. Royce.

Articles of incorporation of the Texarkana Cooperage & Manufacturing Co. of Texarkana, Ark., were filed last week. The capital stock of the company is \$30,000, and the incorporators and directors are F. N. McKee, S. W. Day and W. S. McKee of Fort Smith.

The steamship America was loading a cargo of lumber at Norfolk, Va., on the 21st inst. This will be the first cargo of lumber ever loaded at that port for direct shipment, and is thought to be the commencement of quite an extensive trade with Jamaica and other islands in the West Indies.

It is stated that out of a cut for this season of more than 450,000,000 feet of lumber by the saw mills of Duluth, Wis., and several nearby, there is practically no lumber for sale, except 6,000,000 feet to be cut by a mill not yet built. Such a demand for lumber has never been known in that section.

The Knoxville Furniture Co. of Knoxville, Tenn., is enjoying an unusual volume of business. The company is sixty days behind with orders on its regular lines of furniture and mantels. Orders continue to come in freely, and the company is obliged to increase its force and hours of running.

Mr. R. H. Hendren, manager of the John L. Roper Lumber Co. at Elizabeth City, N. C., received a telegram last week from the firm at Norfolk instructing him to forward a raft of logs through the Dismal Swamp canal. This will be the first shipment through the canal for a number of years.

Chattanooga is coming rapidly to the front as a prominent lumber center. The volume of business during the past thirty days has been unusually large, embracing shipments amounting to 1000 carloads. Of these shipments, 75 per cent. went East, 15 per cent. to the West and 10 per cent. to points in the South.

A deal was consummated last week at Tazewell, Va., by which the heirs of the Shaffey estate sold a large boundary of oak timber to the Chilhowie Lumber Co. The timber is in Poor valley, twenty miles from a railroad, and is the finest in that section. There are 5000 acres in the tract. The price received was large.

The large plant of the Queen & Crescent Lumber & Manufacturing Co. at Nicholson, Miss., was put in operation on the 12th inst. and worked in a most satisfactory manner. This is one of the largest hardwood plants in the State, and will be when finally completed one of the largest and most thoroughly equipped in the South.

During the past few months there has been a big demand for standing timber along the line of the Richmond, Petersburg & Carolina Railroad. In Dinwiddie and neighboring counties hundreds of million of feet have been sold. Saw mills are running at their full capacity, and shipments of lumber to Northern ports are very large. At present over 2,000,000 feet of lumber is awaiting shipment at Petersburg, Va.

The engineers of the Atlantic Coast Lumber Co. of Georgetown, S. C., have just completed a preliminary survey for their railroad, going as far as Marion, S. C., a portion of the way being over the Georgia & North Carolina narrow-gauge roadbed. It is highly probable that this road will be built at once and ultimately connected with the Carolina Northern at or near Marion. This would be quite an addition to Georgetown's facilities for obtaining timber supplies.

The State board of education at Raleigh, N. C., last week granted an option to Capt. K. S. Finch of Charlotte on all the swamp lands owned by the State. These lands aggregate about 600,000 acres, and the price agreed upon was fifty cents an acre. Captain Finch is given the option for one year. He expects to sell the entire block to a Northern syndicate with whom he is negotiating. Much of the land contains valuable timber, while some is covered with several feet of water.

The Empire Lumber & Mining Co. at Bristol, Va., of which J. A. Dull is president, has advertised for bids for the construction of a railroad of ten miles from Shady Valley, in Johnson county, Tennessee, to Big Creek Park, the eastern terminus of the Holston Valley Railway, whose western terminus is Bristol. The contract for this work will probably be let early in September. The company owns vast and valuable timber possessions in Shady Valley, and has already arranged to establish an extensive saw-mill plant at that place.

The North Carolina Pine Association, John L. Roper, president, met in Norfolk, Va., on the 18th inst. and advanced the price of lumber fifty cents to \$1 a thousand feet, according to grade. Four-four and five-four No. 1 and four-four and five-four No. 2 were advanced \$1 a thousand, and 12-inch box was marked fifty cents per thousand feet above present quotations, the advance to take effect at once. It is stated that the advance is due to the urgent demand prevailing and to the fact that the supply is exceedingly light. It is thought a further advance will be ordered if situation remains as at present.

The division of forestry at Washington, through Mr. Gifford Panchot, the forester of the department, has prepared a circular detailing what has been done for the preservation of forests and the replanting of those partially or wholly destroyed. The circular gives a detail of what has been done along this line by farmers and lumbermen, and calls attention to the great benefit to be derived from planting trees for shade, firewood and timber, as well as for protection to streams and water-courses. Mr. Panchot hopes to secure sufficient information to enable him to prepare a statement of the work done during the year, and to show the progress the country is making in the science of forestry.

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record, Baltimore, Md., August 24.

The local phosphate market is quiet, in sympathy with the inactivity in other fertilizer ingredients. Prices rule steady, and there is some demand from out-of-town manufacturers, but the dealings for the week have been very light. From points of production throughout the South miners are pushing operations in order to carry out their contracts. A number of foreign charters are reported, and indications point to heavy shipments for September. Recent charters reported are as follows: British steamer Garlands, 1361 tons, from a Southern port to United Kingdom or Continent with phosphate rock on private terms; British steamer Lyell, 1538 tons, from Fernandina to Hamburg and Rendsburg with phosphate rock at 19/; a British steamer, 1350 tons, from Fernandina to Rotterdam with phosphate rock at 17/6; British steamer Iona, 1109 tons, from a Southern port to United Kingdom or Continent with phosphate rock on private terms; Austrian steamer Abanzin, 1838 tons, from Savannah to Mediterranean with phosphate rock on private terms. In South Carolina phosphate rock is very firm, under a good domestic and foreign demand. Crude rock is quoted \$4.25 to \$4.50, and dried rock \$4.50 to \$5 per ton of 2400 pounds f. o. b. Ashley river. In Florida the work of mining is being vigorously pursued, and extensive explorations for new deposits are being made, some of which have had successful results. The foreign demand for Florida pebble and hard rock was never better, and some companies have sold months ahead at satisfactory figures. The movement in Tennessee possesses all the features associated with discoveries of valuable phosphate rock, and the excitement grows more intense as the season progresses. New companies are entering the field well equipped for development, and the output for 1899 from the Tennessee phosphate section will be somewhat of a surprise to the public. The demand is all that could be desired, and foreign shipments for next month will be very heavy. Prices continue firm, and holders are well supplied with foreign and domestic orders.

Fertilizer Ingredients.

There is a very quiet tone in business throughout the market for ammoniates, and the volume of transactions for the week has been only moderate. The demand from Eastern buyers is limited in character, and from Southern sources very little trade has developed. Stocks in the West are firmly held at quotations. Exporters are making inquiries for dried blood and tankage, but at present rates of freight purchases are light. Sulphate of ammonia is firm, in sympathy with higher prices abroad. Nitrate of soda is quiet and steady.

The following table represents the prices current at this date:

Sulphate of ammonia (gas)	\$3 09 1/2 @ 3 10
Nitrate of soda	1 70 @ 1 72 1/2
Blood	1 97 1/2 @ 2 00
Hoof meal	1 60 @ 1 65
Azotine (beef)	1 95 @ 2 00
Azotine (pork)	1 95 @ 2 00
Tankage (concentrated)	1 67 1/2 @ 1 70
Tankage (9 and 20)	1 70 & 10 1/2 @ 1 75 & 10
Tankage (7 and 30)	17 00 @ 17 50
Fish (dry)	20 00 @
Fish (acid)	12 00 @

Phosphate and Fertilizer Notes.

It is said that the Palmetto Phosphate Co. has a large force of men prospecting along the river from Charlotte Harbor northwardly for new beds of pebble phosphate. The Peace River Mining Co. is pushing its railroad northward, so as to be ready to haul phosphate to the works

at Hull. This company contemplates many improvements in its plant, and is expending large sums of money.

The phosphate business at Port Tampa, Fla., is at present quite extensive, and shipments for the present month will be heavy. The bark Annie Fletcher cleared on the 14th inst. with 900 tons of commercial fertilizer for Swansea, Wales. The steamships Feliciano and Ragusa were loading with phosphate on the 19th, and the steamers Atlantic and Nithsdale were awaiting berths to load cargoes of phosphate rock.

At Harpeth, Tenn., the phosphate excitement is quite pronounced in character. T. A. Steele of Nashville, representing capitalists, is said to have during the past week taken options on a number of tracts of land in that vicinity said to contain some rich deposits of phosphate rock. Mr. Steele states that his company will do the work of excavating, and a force of hands will be sent out to develop the mines, about a mile and a-half from Nashville. Mr. I. L. Cole is said to have a rich deposit of phosphate rock on his farm. An analysis of the product has been made, which shows 77 to 82 per cent. pure phosphate. It is stated that Smith Bros. of Birmingham, Ala., and some parties from Maury county, Tennessee, have secured a six-year lease of the mining privileges on the Howard phosphate farm on the Mt. Pleasant pike, and will organize a stock company to be known as the Howard Phosphate Co., with a paid-up capital of \$50,000.

CHEAP SMOKELESS COAL.

Cotton-Mill Opportunities at Fort Smith.

In a letter to the Manufacturers' Record ex-Governor Wm. M. Fishback of Fort Smith, Ark., says:

"In your impression of August 11 is a letter from D. Allen Willey, in which is found the following language in regard to the 'Center of the World's Textile Industry,' Manchester, to wit: 'Steam is used entirely. * * The laws relating to smoke are very severe, and no company can allow its chimneys to smoke more than four minutes at a time. This is a severe drawback.' * * *

"I desire to call attention to this coal field, extending seventy-five miles east and north of east, forty-five miles south and 125 miles west and southwest from Fort Smith. It is entirely smokeless. You can go upon the Grand Central Hotel, overlook the whole city of more than 20,000 people and more than thirty factories of various kinds, all in full blast, with her 20,000 people all burning coal, and you will not see as much smoke as comes out of one fireplace burning wood or Kansas coal.

"The quartermaster-general of the United States army in his official report of three years ago (I have not seen his last two) shows that our coal is from 25 to over 100 per cent. superior in heating capacity to any other in the world yet tested.

"Besides this cheap fuel, which is delivered here at seventy-five cents per ton (ought to be at not exceeding fifty cents), we have an inexhaustible supply of hardwood and pine, and a rapidly-expanding market to our west, southwest, northwest, which is filling up with an agricultural people more rapidly than any part of our Union, while we also have railroads penetrating every part of it.

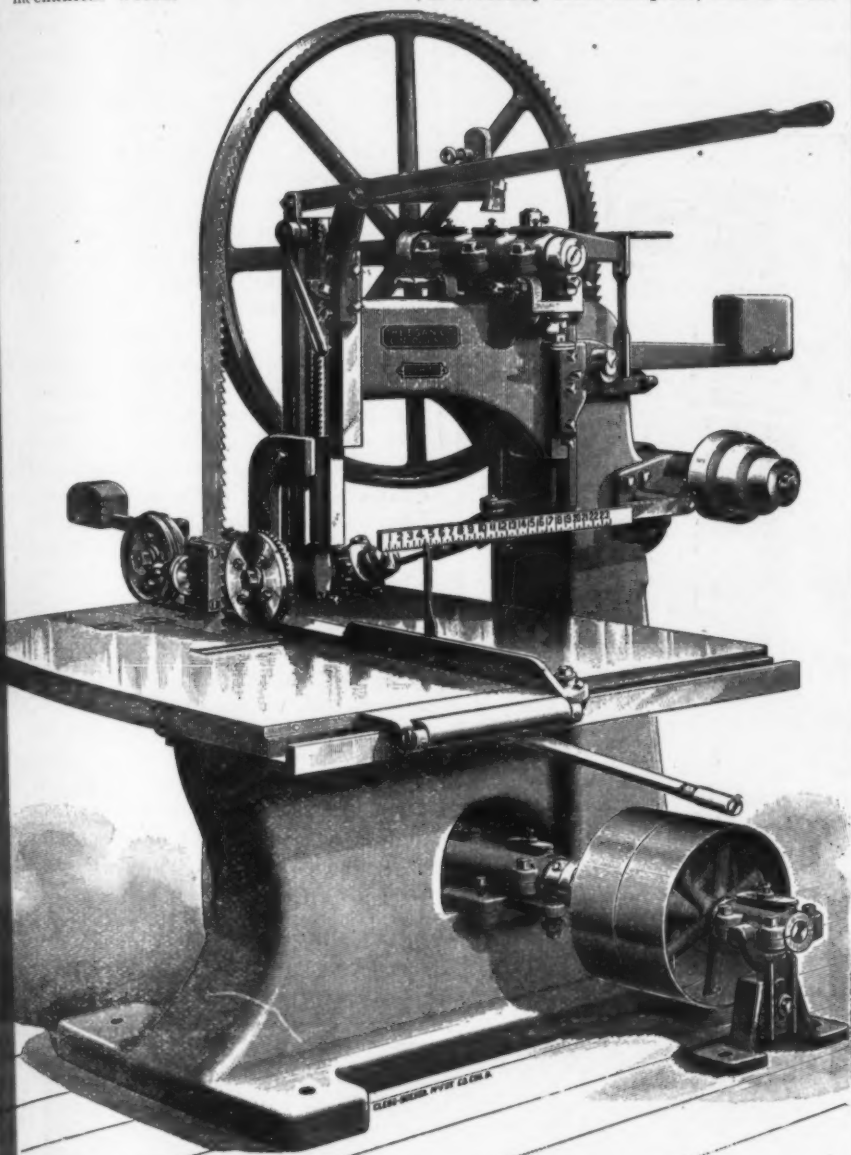
"Where in the United States are offered better openings for cotton mills?"

The output in the Joplin (Mo.) district during the week ended August 19 was 11,786,850 pounds of zinc and 1,056,000 pounds of lead, valued in all at \$265,493.

MECHANICAL.

Self-Feeding Band Ripping Saw.

Managers of industrial plants in which woodworking machinery finds a place should investigate the merits of the new self-feeding band ripping saw which we illustrate herewith. This machine is built on the most advanced principles by the Egan Co. of Cincinnati, Ohio. This company has a force of expert mechanics constantly at work designing new machines and improving old ones, and is keeping fully abreast of the natural evolution that is steadily going on in the mechanical world.



SELF-FEEDING BAND RIPPING SAW.

For detailed technical description of this new machine address the company for illustrated circulars.

Mechanical Draft and Boiler Efficiency

The following extracts are from the paper read by Walter B. Snow of the engineering staff of the B. F. Sturtevant Co. before the Engineering Society of Columbia University, New York. The paper is entitled "The Influence of Mechanical Draft upon the Ultimate Efficiency of Steam Boilers."

The ultimate efficiency of a steam boiler is dependent upon:

First—The primary cost of the entire plant and the fixed charges thereon.

Second—The quantitative efficiency of the plant as a means of burning the fuel supplied and transferring its heat to the water evaporated.

Third—The operating expense, including the fuel.

In addition, there are always distinct advantages or disadvantages which, while of marked importance, can only be measured qualitatively in their relation to the superiority of any given arrangement or appliance.

In the accompanying curves (Fig. 1) are

presented the relative costs of chimneys and of equivalent mechanical-draft equipments in a number of boiler plants widely different in character and rated capacity. In certain of these the cost of the existing chimney is known, and that of the complete mechanical-draft plant is estimated, while in others the cost of mechanical-draft installation is determined from the contract price, and the expense of a chimney to produce equivalent results is calculated. Costs are shown for both single, forced and induced engine-driven fans and for duplex engine-driven plants, in which either fan may serve as a relay. An apparatus of this latter type is evidently most complete, and is neces-

in the accompanying drawings, Figs. 2 and 3. These show a plant of 2400 horsepower of modern water-tube boilers, twelve in number, set in pairs and equipped with economizers. Fig. 2 indicates the location of a chimney nine feet in internal diameter by 180 feet high, designed to furnish the necessary draft. Fig. 3 represents the same plant, with a

indicated, show a saving in first cost of \$6400 as the result of using the mechanical-draft method. The intensity of draft produced by a fan, and the readiness and economy with which it may be secured, make it a simple matter to maintain a combustion rate higher than that ordinarily obtained with a chimney. The comparatively low rates of combustion,

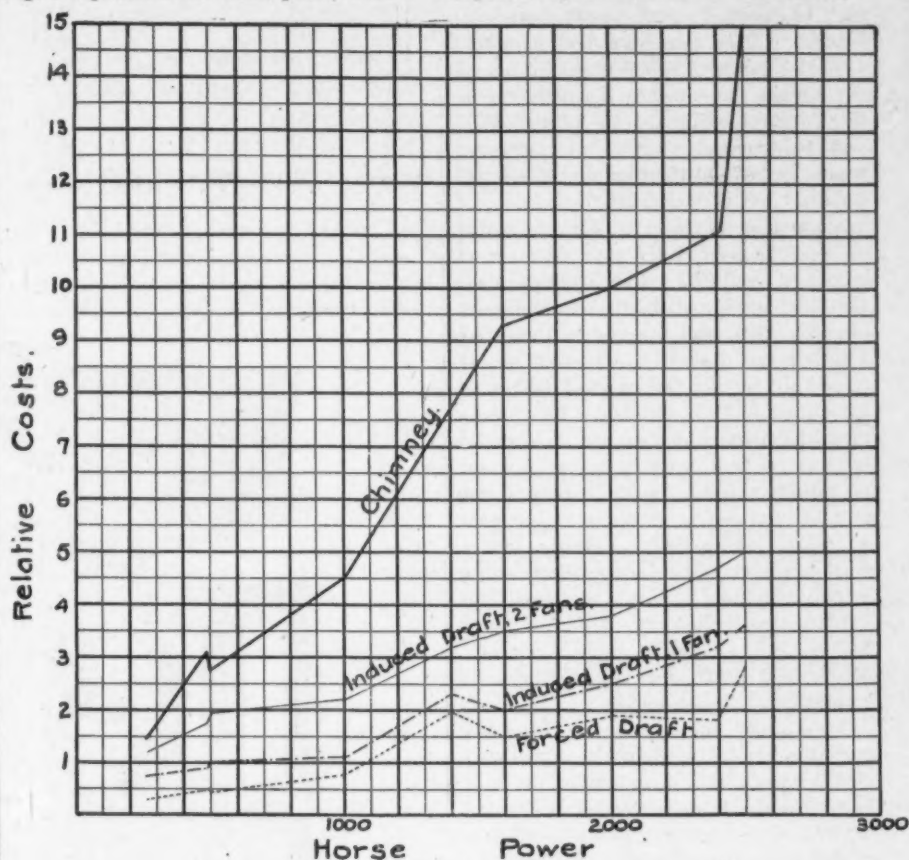


FIG. 1.

complete duplex induced-draft apparatus substituted for the chimney and placed above the economizer connections. Each of the two fans is driven by a special engine, direct-connected to the fan shaft, and each is capable of producing draft for the entire plant. A short steel-plate stack unites the two fan outlets and discharges the gases just above the boiler-house roof. All of the room necessary for the chimney is saved, and no valuable space is required for the fans. Relative costs are as below:

which have heretofore obtained, are largely due to the inability of the ordinary chimney to overcome the increased resistances incident to the maintenance of a higher rate. Boilers have been proportioned to meet these conditions, but it is manifest that, by changes in design or by the introduction of heat abstractors, they may, under the influence of mechanical draft, be readily operated at considerably above their original ratings, with substantially the same efficiency. As a result, it is possible to obtain a given out-

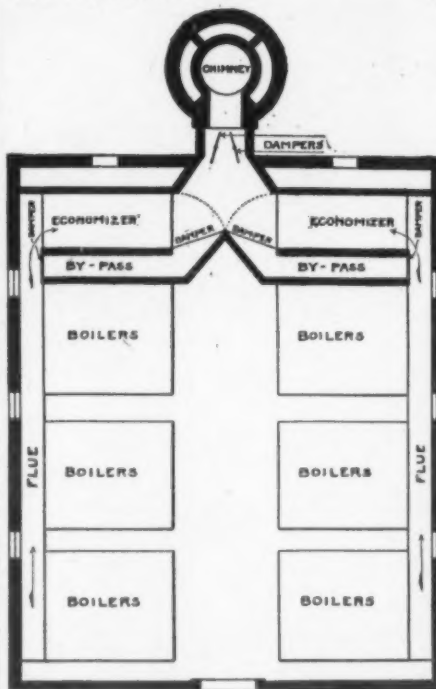


FIG. 2.

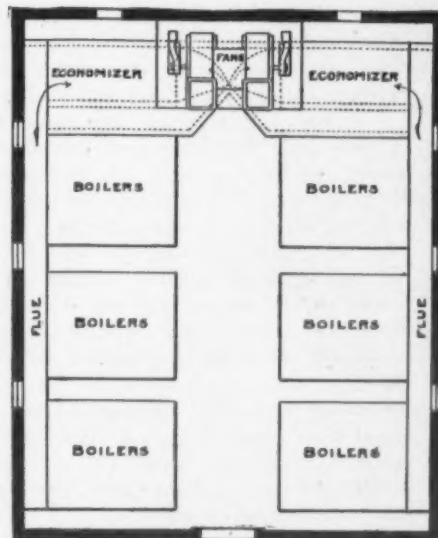


FIG. 3.

CHIMNEY DRAFT.	
Cost of chimney.....	\$10,700
Cost of damper regulators and dampers	400
	\$11,100

MECHANICAL DRAFT.	
Cost of mechanical draft complete....	\$4,700
Saving by using mechanical draft....	6,400
	\$11,100

The costs of the chimney and the mechanical-draft apparatus, which are also

put with a plant of less size and first cost than is possible with a chimney. This is particularly true where the steam consumption is liable to sudden fluctuations for comparatively short periods.

The typical boiler plant already presented will serve as an excellent illustration. Suppose it is determined to omit two of the twelve boilers, say one from

each pair at the end farthest from the economizers, and to force the remaining boilers up to the original rating, which can be easily done by mechanical means, as a substitute for the chimney. This will decrease the rating to 2000 horsepower, or by 16% per cent. The volume of air required per pound of coal, with the higher combustion rate, deeper fires and mechanical draft under automatic control, will be somewhat less than that with the chimney, while if the economizers remain the same their capacity relative to the heating surface of the boiler will be greater, so that the ultimate waste by heat in the escaping gases will certainly not be increased.

A problem that has to be faced sooner or later in most boiler plants is that of increased capacity. This differs from that just presented, in that the chimney already exists, and it becomes a question whether the desired result shall be obtained by forcing the existing boilers or by adding to their number. The former method demands an increase in intensity of draft, which, with a given chimney, operating well up to its capacity, can only be obtained by considerable increase of height at excessive expense, while, with either method, a larger volume of air is required. As a result, increased output frequently demands not only more boilers, but a new or higher chimney. Mechanical draft steps in and presents a solution of the problem.

Considering the matter of increased output solely in the light of comparative cost between the introduction of more boilers or the introduction of mechanical draft, and disregarding any possible cost of change in the chimney, we may again take for illustration the plant of 2400 rated horse-power. Suppose it is desired to increase its capacity to 2800 horsepower, or by 16% per cent. Then the relative costs under the two conditions will appear as here indicated:

RELATIVE COSTS.

2800 nominal horse-power plant, with chimney draft:
Two additional boilers..... \$6,167
Settings, etc., for two boilers..... 1,250
Addition to building, etc..... 2,700

\$10,117

2800 nominal horse-power plant, with mechanical draft:
Fan dampers and ducts..... \$1,500
Saving by using mechanical draft.... 8,617

\$10,117

No greater waste occurs in modern steam-boiler practice than that which is inherent in the employment of a chimney for the production of draft, namely, the loss of heat in the escaping gases. As the chimney depends for its action upon the maintenance of a temperature difference between the internal gases and the external air, it is manifest that, with a chimney, this waste can never be eliminated. In the case of a fan, however, the power expended as measured in heat units necessary to produce the same results may, under ordinary conditions, be only about one-seventy-fifth of that necessary with a chimney. In other words, the fan renders available for utilization practically all of the heat wasted by the chimney, while it possesses the further advantage of readily creating the additional draft required when heat-abstracting devices are introduced. The average results obtained by Roney from tests of nine plants thus equipped were as here presented:

AVERAGE RESULTS OF TESTS OF PLANTS EQUIPPED WITH ECONOMIZERS AND MECHANICAL DRAFT.

Temperature of gases entering economizer 526.3 degrees.
Temperature of gases leaving economizer 269.6 "
Decrease in temperature of gases 256.7 "
Temperature of water entering economizer 150.4 "
Temperature of water leaving economizer 207.1 "
Increase in temperature of water 146.7 "
Fuel saving, in per cent. 14.64

The comparative efficiency of various coals as determined by Barrus is indicated in the accompanying table; which is self-explanatory. The evidence in

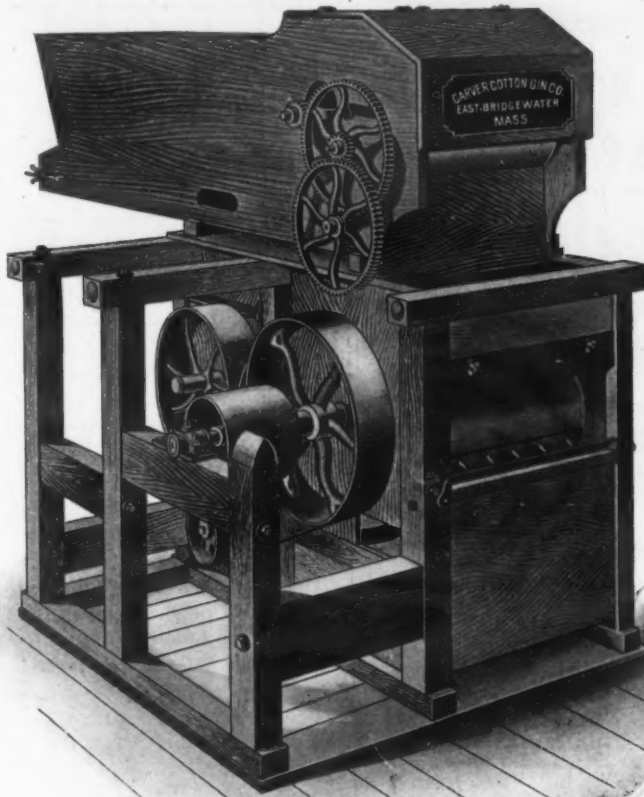
favor of burning low-grade fuels is conclusive. Such results can, however, only be secured by positive and intense draft:

KIND OF COAL.	Water evaporated from and at 212° by one lb. of Dry Coal.	Relative efficiency in per cent. Cumberland=100.	Cost of Coal per ton.	Fuel cost of evaporating 1000 lbs. of water from and at 212°.	Relative efficiency in per cent. measured by cost to evaporate 1000 lbs. Cumberland =100.
Cumberland	11.04	100	\$3 75	\$0.1698	100
Anthracite (broken)	9.79	89	4 50	0.2297	74
Anthracite (chestnut)	9.40	85	5 00	0.2660	64
Two parts pea and dust and one part Cumberland	9.38	85	2 58	0.1375	123
Two parts pea and dust and one part culm	9.01	82	2 58	0.1432	119
Anthracite (pea)	8.86	80	4 00	0.2259	75
Nova Scotia culm	8.42	76	2 00	0.1187	150

Improved Cotton Opener and Cleaner.

A valuable machine to all ginneries is one enabling them to clean their cotton before they gin it. It is a question that has been agitated the past year all over

the cotton-growing district. An improved cotton cleaner and opener is being introduced, illustrated herewith. This machine has a drum with nine bars, with steel teeth inserted; they pass through a cast-iron curve having steel teeth, which



IMPROVED COTTON OPENER AND CLEANER.

separates and passes over a circular wire screen; just below this wire screen is a double blower, which draws out the dust and trash, leaving the cotton in a light, fluffy state; when it is ginned it makes a beautiful sample. The cleaner enhances the value of all cotton that is passed through it from one to four grades, and in the case of very dirty and trashy cotton renders merchantable that which would be abandoned as worthless. It can be used to open frost-bitten or unopened bolls, thereby saving cotton that would be lost, enabling the planter to save in good condition his whole crop. The Carver Gin Co. of East Bridgewater, Mass., is the manufacturer.

Moyer Overhead Tracking System.

In any plant where improved machinery is being constantly added to lessen the amount of labor required to do a certain work, no machinery is of more value in the saving of time and labor than the Moyer overhead tracking system. The system as applied to a silk mill (illustrated herewith) consists of one long track running the length of the room directly over the wrapping machines, and running over to the unwinding machine. The empty rolls or reels are taken from the space where the empties are stored over the track to any of the machines along the row, and here, by means of a quick-acting pulley block, one man easily lowers the reel into the position in the machine. After the silk has been wound on the reel, the traveler is brought over the machine again and the reel raised to the traveler and run along to the unwinding machine, where the traveler is ready to be used for another load. The reel with the silk weighs 300 to 500 pounds, which load is handled easily by one man. The old method was to have men carry the reels, but this was slow, and as it required two men, the time of one man is thus saved and the reel handled much quicker and with less liability to be damaged.

If it is required to weigh the silk accurately, then a Moyer United States standard scale is supplied, fitted into the track, so that the load is weighed as it



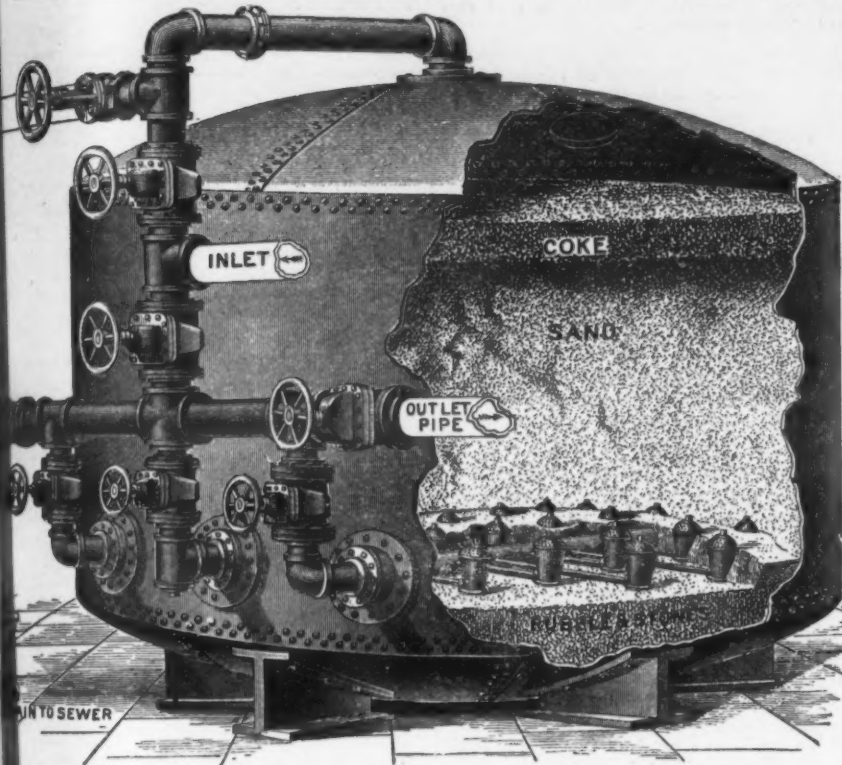
SILK MILL AT WILLIAMSPORT, PA., WHERE MOYER OVERHEAD TRACKING SYSTEM IS USED.

passes over the track, thus doing away with all lifting on and off a floor scale.

Attention is also called to the Moyer extension hangers, the advantage of these hangers being that they can readily be made of the length required, so that the trolley on the track will clear all projec-

washed, and no partitions are necessary to divide the bed, as the current is forced up nearly in a straight line. No power or machinery for stirring the bed is required when cleansing filters by sectional washing.

The filter's builder claims that its pat-



SECTIONAL WASHING FILTER.

tions under the ceiling. The entire system of tracking is inexpensive and soon pays for itself.

In addition to the style of tracking shown, tracking of "I" beams, channel iron and "T" rails is made.

For estimates address Mr. J. W. Moyer, the manufacturer, 125 North Third street, Philadelphia, Pa.

ents, however, cover all the other washing methods known.

Sectional washing is used in all this company's filters over twenty inches in diameter.

This filter is suitable for large mills and city water works. For information of this or other designs of equipment for filtering purposes address the manufac-

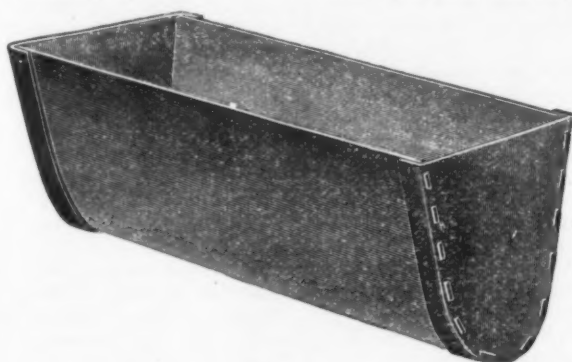


FIG. 1.

Sectional Washing.

We illustrate a sectional washing filter which the wash water, under pressure, enters the filter at bottom, passes up and out at top. The entire force of this reverse current used in washing is directed against one-third of the bed only for about five minutes, then it is shut off and



FIG. 2.

central one-third of the bed is stirred in the same manner; lastly, the remaining one-third is washed.

By this system of washing the filter-bed thorough attrition and scouring of particles is accomplished, as the entire surface of water and pressure is directed against the one-third of the bed being

turer, the New York Filter Manufacturing Co. of 26 Cortlandt street, New York.

Patent Steel Elevator Bucket.

Mills, factories and manufacturing plants of all kinds are known to use freely the varying steel-bucket systems now on the market.

Varying forms are met with in these

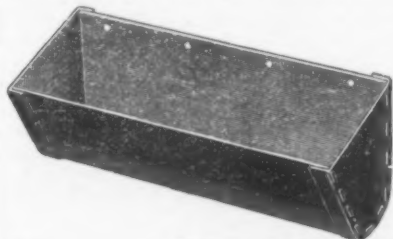


FIG. 3.

buckets, each manufacturer claiming that his particular form has the most decided advantages, both as to efficiency and price. Herewith illustrated is a patent steel elevator bucket, to which attention is called in the belief that it has features of importance that will appeal to experienced users of such apparatus and

lead to investigation by those not familiar with its details.

The Cleveland Elevator Bucket Co. of Cleveland, Ohio, is the manufacturer of this bucket, and it enumerates that it is made of the best grade of steel, without a rivet, thus ensuring a smooth inside surface and free delivery; greater capacity than other buckets of listed corresponding dimensions; reinforced by the flanges on end pieces, and does not require band iron around top or brace across center to stiffen it; can be made with extra heavy ends and light body (this being an important feature said not to exist in other buckets, and is particularly useful when buckets are fastened at the ends to chain carriers); made in any length required, of one continuous body piece; metal used in making these buckets is from six to eighteen gauge.

Further information may be obtained upon request.

TRADE NOTES.

Carpet Cleaner.—The Hayes Carpet Cleaning Machine Co. of Birmingham, Ala., wants to place agencies for disposing of its devices.

Hyde Water-Tube Boilers.—Messrs. Hyde Bros. & Co. of Pittsburg have recently sold two 250-horse-power Hyde water-tube boilers for waste heat to the Republic Iron & Steel Co. for the latter's East Chicago mill.

Hotel for Sale.—A complete hotel, located in one of the oldest health and pleasure resorts in the South, is offered for sale. The business is said to be increasing rapidly. (See advertisement of Messrs. Alexander & Johnson.)

Morrin Climax Steam Boiler.—Chicago Office.—The Clonbrock Steam Boiler Co. of Brooklyn, N. Y., manufacturer of the Morrin Climax steam boiler, has established an office in Chicago; Mr. Herbert B. Ham is in charge, with rooms at No. 1457 Monadnock Building.

New York Blower Company.—The New York Blower Co. has its works at Louisville, Ohio, and its offices at 39-41 Cortlandt street, New York city. The company acts as heating and ventilating engineer and manufactures blowers, exhausters, heaters, engines, ventilating and heating apparatus, drying apparatus, etc.

W. J. Carlin's New York Office.—Mr. W. J. Carlin of 610 Lewis Block, Pittsburg, Pa., has opened offices in Room 1210, Downing Building, 108 Fulton street, New York city, under the management of Mr. Andrew Harper. Mr. Carlin is a general contractor for supplying machinery and tools of all kinds, contractors' and rolling-mill machinery, steam shovels, etc.

Preferred Stock in Knitting Mills.—Mr. J. F. Taylor, secretary of the Orion Knitting Mills, Kingston, N. C., is offering for sale \$8000 preferred stock in his company. The amount is redeemable in ten years, and is to refund an equal amount due October 1. Object of reissuing is to secure lower rate of interest. Investors are invited to offer bids. (See advertisement.)

American Stokers.—The Cudahy Packing Co. has adopted the American stoker for its plants at Kansas City, South Omaha and Sioux City. This aggregates an instalment of forty-nine machines, and indicates the high appreciation of the American stoker by manufacturers generally for its practicability and economy in the use of fuels. The American Stoker Co. of New York makes the American stoker.

Michigan Foundry for Sale.—One of the best-equipped foundries in the country is offered for sale by Messrs. Stern & Boyer of 603 Western Union Building, Chicago, Ill. The plant is located in Michigan, has capacity of thirty tons, which can be increased to forty tons, two cupolas and room for another, all machinery modern throughout; has done a large business and has many orders on hand now. (See adv.)

Orders for Spiral-Riveted Steel Pipe.—The Abendroth & Root Manufacturing Co., 90 John street, New York city, states that the demand for its celebrated spiral-riveted steel pipe for water-works construction has been so great since the first of the year that it is obliged to refuse orders; also reports a large export trade in both spiral pipe and the Root boilers. The company has just

made a shipment of 15,000 feet of 12-inch pipe abroad, and within the last week shipped pipe and boilers to almost every part of the globe, including Alexandria, Egypt, and Tokio, Japan.

Copper and Steel and Flexible Metallic Tubing.—Messrs. Walter L. Flower & Co. of 1605 Chemical Building, St. Louis, Mo., have been appointed agents for the United Flexible Metallic Tubing Co. of London, England, which manufactures a copper and steel and flexible metallic tubing to stand any given pressure and designed for every service for which rubber hose has heretofore been used. The tubing is claimed to be practically indestructible, ineffective of climatic changes and to have many advantages over any material heretofore placed on the market for the service in question. Correspondence on this tubing is solicited by the agents.

Shipping Safes South.—In every business or office that is of any importance whatever there is use for safes. The safekeeping of books and general documents whose loss could not be replaced, or if at all only by most inconvenient means and at some cost, has made the use of safes world-wide. In this country there are a number of prominent safe manufacturers that have attained a position of eminence in their especial fields. Among these is the York Safe & Lock Co. of York, Pa. This company's most recent Southern contracts were two large safes, weighing about 8000 pounds each, for installation in the city treasurer's office in Norfolk, Va.

Installing Hyatt Roller Bearings.—As the merits of the Hyatt roller-bearing device becomes more widely known the manufacturer receives increased orders for them. Some recent contracts of considerable size have been placed. Contracts have been closed to install Hyatt shafting hangers and boxes for the Elmira (N. Y.) Knitting Co., Norwalk (Conn.) Iron Works Co., Ferracute Machine Co. of Bridgeton, N. J., and Columbia Electric Vehicle Co. of Hartford, Conn. A contract was also closed to furnish twenty 16-inch pillow blocks and forty five-inch pillow blocks for ten cement mills, to be used by the Alpha Portland Cement Co. The Hyatt Roller Bearing Co. of Harrison, N. J., manufactures these bearings.

Hammond Fire Brick Company.—Mr. J. B. Hammond of Bolivar, Pa., representing a number of parties, has purchased the works of the Glade Fire Brick Co., and there has been organized to operate the plant the Hammond Fire Brick Co. Stockholders in the Reese-Hammond Fire Brick Co. will be interested. Of the new company, J. B. Hammond is president; T. M. Berkey, vice-president; Thomas I. Brett, secretary; E. R. Hammond, treasurer. The plant has a capacity of 25,000 bricks per day, which will be doubled. With the plant is included 700 acres of coal and superior fire clay, the coal deposit consisting of a three to five foot vein, and the clay of three veins; five-foot vein flint clay is high grade. Analysis shows that the flint clay is equal to any of the high-grade clays of the country. There are two veins of plastic clay, one eight feet and one twelve feet in thickness. The works are located on the main line of the Baltimore & Ohio Railroad, between Fairmont and Grafton, W. Va. Gas is used as fuel. The works will be operated principally on high-grade furnace and coke-oven brick.

Incandescent-oil Light.—The increasing use of lighting apparatus for burning oils makes of special interest at this time reference to the Kitson incandescent-oil light. The principle of burning kerosene oil or naphtha in a lamp, with a blue flame, and heating a mantle to incandescence, was first invented in this country by Mr. Arthur Kitson in 1885. The growth of improvement in the device as first marketed proceeded until 1897, when the present form of Kitson lamp was designed, and a company with \$2,000,000 capital was organized to introduce it. Local companies have been organized throughout the country from time to time, and the growth of the business has been very rapid. Thousands of the lamps are in successful operation in various parts of the country, and it is claimed the demand pushes the several factories to the utmost. It is claimed the candle-power of the light is the highest that has ever been produced from a mantle, and that it has been tested photometrically to the extent of as high as 700 candle-power. The principle of the Kitson light applied to cooking and heating stoves will be on the market soon. The parent company is the Kitson Hydro-Carbon Heating & Incandescent Lighting Co. of Eighth and Willow streets, Philadelphia, Pa., George W. Elkins, president, and Arthur Kitson, general manager.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted." In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

ALABAMA.

Anniston—Improvement Company.—The Comer Investment Co. has been organized, with J. W. Comer, president, and R. H. Cobb, vice-president and general manager, for development purposes, and will erect a number of houses, etc.

Bessemer—Pipe Works.—F. B. Nichols will erect cast-iron pipe works, as reported last week, but is not as yet prepared to give full facts for publication.

Bessemer—Rolling Mill.—The Bessemer Rolling Mill Co. will be reorganized and resume operations at its rolling mill. Morris Adler and associates of Birmingham arranged the details.

Birmingham—Electric-light Plant.—The Consolidated Electric Light Co., F. H. Armstrong, secretary, will hold a meeting on September 5 to pass upon the question of whether or not it will increase its capital stock from \$500,000 to \$550,000.

Birmingham—Coal Company.—R. H. Turner, Walter Puckett and M. O. Copeland have incorporated the Gaines Coal Co., with a capital stock of \$2400.

Courtland—Flour Mill.—F. T. Neeley of Hillsboro contemplates the establishment at Courtland of a flour mill.

Florence—Ice Plant.—The Chapin Ice & Coal Co. will install a 20-ton ice and refrigerating plant.

Gadsden—Oil-land Development.—G. W. Fowler will secure, it is reported, options on lands in and around Gadsden, and will develop for oil, coal, lime, gas, etc. Interested with Mr. Fowler is the Pennsylvania Oil Co.

Gadsden—Iron Furnace.—Indiana parties are investigating with a view of putting the Coosa furnace in operation; capacity fifty tons per day and employs 300 operatives.

Huntsville—Telephone System.—The American Telephone Co., recently organized, has been granted franchise for establishment of a system.

Huntsville—Lime-kiln.—W. J. Bennett & Co. will either interest outside capital in the erection of a 100-barrel lime-kiln or erect such a plant themselves (as reported last week).*

Huntsville—Sewing-machine Factory.—The No Treadle Sewing Machine Manufacturing Co., capitalized at \$200,000, of Terra Haute,

Ind., is investigating for the removal of its plant to Huntsville; T. W. Pratt is said to be promoting the deal.

Limestone—Cotton Compress.—Fletcher Bros. have established a round-bale cotton compress with capacity for ginning and baling twenty-eight bales per day.

Lineville—Gold Mining.—L. Levi of Anniston has, it is reported, purchased and will develop two extensive gold-mining properties near Lineville.

Russellville—Ore Lands.—Adler & Co., Room 3, Potter Building, Birmingham, Ala., are the purchasers of the 360 acres of ore land at Russellville, reported last week as having been purchased by Edgar Adler. Company has purchased altogether in the Russellville district about 1200 acres of ore lands.

Wyeth City—Cotton Mill.—The formation of a company to build cotton mill is proposed. J. A. McKinsty can give information.*

ARKANSAS.

Danville—Turnpike Company.—S. B. Hill, John McCarthy and J. E. Wooten have incorporated the Danville Turnpike Co., with a capital stock of \$10,000.

Fort Smith—Drug Company.—Chartered: The Morris-Morton Drug Co., by A. D. Morris, Henry C. Dead, John W. Morton and others; capital stock \$75,000.

Fort Smith—Publishing.—The Democrat Publishing Co. has been incorporated, with a capital stock of \$100,000, by W. W. Waters, James H. Foster, Lewis S. Brawn and others.

Newport—Lumber Company.—The Kelly Improvement (Lumber) Co. has been incorporated, with a capital stock of \$25,000, by Charles B. Kelly (president), Douglas Terry and James L. Royce.

Pine Bluff—Windmill and Agricultural Implement Factory.—W. S. Lamb of Freeport, Ill., is investigating with a view to removing his windmill and agricultural implement factory to Pine Bluff.

Russellville—Coal Mines.—The Mount Nebo Anthracite Coal Co. (recently reported as incorporated) has been operating for some time and is fully equipped with machinery.

Texarkana—Cooperage, etc.—F. W. McKee, S. W. Day and W. S. McKee have incorporated the Texarkana Cooperage & Manufacturing Co., with a capital stock of \$30,000.

FLORIDA.

Bartow—Timber-land Development.—J. R. Padgett and Robert Black of Valdosta, Ga., have purchased, it is reported, 30,000 acres of timber land near Bartow and will develop.

Hull—Phosphate Plant.—The Peace River Phosphate & Mining Co. contemplates expending a large amount of money in enlarging and improving its plant.

Lake Mary—Starch Factory.—The Planters' Manufacturing Co., F. G. Perkins, president, is erecting a starch factory 100x300 feet, and will also install rice machinery; capacity will be 150 tons of raw material per day.*

Sanford—Wood-preservative Manufacturing.—C. W. Kennon of Tampa will establish a mill and factory in Sanford for the manufacture of a wood-preservative from the palmetto tree.

GEORGIA.

Athens—Broom Factory.—Henry G. Kenny will establish a broom factory.

Athens—Cotton Mill.—A company with a capital stock of \$200,000 will be organized for the establishment of a 2000-spindle and 200-loom mill; names of interested parties will be announced later.

Auraria—Gold Mine.—F. C. Bogart and W. M. Keady of Dahlonega have purchased and will develop the Hargrave property at Auraria; a 10-stamp mill will be erected.

Barnesville—Cotton Mill.—E. H. Spivey, Talbotton, Ga., is investigating with a view of establishing an underwear mill at Barnesville, and not at Dublin, as was reported last week.

Canton—Cotton Mill.—Efforts are being made for the organization of a \$100,000 stock company for the establishment of a cotton mill; \$60,000 has already been subscribed. Among those interested are A. T. Jones, Col. Tom Hutchinson, W. J. Webb, Dr. T. W. Galt, Ben. F. Perry, J. E. Rudasill and others.

Carrollton—Mercantile.—J. L. Vaughan,

Mrs. Esther Sturdivant and E. H. Powell have incorporated as Vaughan, Sturdivant & Powell to conduct a mercantile business; capital stock \$12,000.

Cedartown—Cotton Mills.—The Cedartown Cotton Manufacturing Co., the Paragon Mills and the Southern Extension Cotton Mill Co. will be united under one management and operated as the Cedartown Cotton Co.; a new bond issue will be made and the plants largely increased.

Cedartown—Iron Furnace, Iron and Coal Mines, etc.—The Georgia & Alabama Iron Co. is being organized, to have a capital stock of \$1,300,000, by Messrs. Rogers, Brown & Co. of New York city, Eugene Zimmerman of Cincinnati, Ohio, and others. The company will consolidate the properties of the Cherokee Iron Co. and the Western Mining Co., including an iron furnace at Cedartown, coal and iron lands located near Cedartown and extending into Alabama, etc.; the mineral lands comprise about 9000 acres, with five developed ore mines; capital will be divided into \$650,000 preferred and \$650,000 common stock. For further information address Rogers, Brown & Co., New York city.

Columbus—Pants Factory.—Montgomery & Owens have secured building and will install machinery for the manufacture of pants.

Georgia—Graphite Deposits.—The organization of a company is contemplated for the development of graphite deposits in Northern Georgia. Address James G. Miller, care of U. S. Cast Iron Pipe & Foundry Co., Chattanooga, Tenn.*

Hogansville—Cotton Mill.—The Hogansville Manufacturing Co. has been incorporated, with a capital stock of \$75,000, for the erection of a cotton mill.

Lindale—Cotton Mill.—The Massachusetts Mills in Georgia will, it is reported, duplicate its present plant, which will mean an outlay of \$1,000,000, a combined capitalization of \$2,000,000 and the employment of over 3000 operatives; equipment of present plant 30,000 spindles and 1132 looms.

Macon—Fertilizer Factory and Tallow Refinery.—The Macon Hide & Tallow Co. contemplates the erection of the fertilizer factory and tallow refinery reported last week.*

Quitman—Cotton Mill.—The company lately reported as to be organized by F. J. Spain and others for establishment of a cotton mill will be known as the Atlantic and Gulf Mills; building has been secured and more than \$75,000 subscribed; J. W. Spain, J. W. Oglesby, R. C. McIntosh, J. O. Lewis and C. T. Tillman, committee to receive bids on machinery.

Toccoa—Furniture Factory.—J. B. Simmons, E. P. Simmons and D. A. Sutrey have incorporated the Simmons Furniture & Lumber Co. for the manufacture of all kinds of furniture, etc.; capital stock \$20,000.

KENTUCKY.

Ashland—Pulp Mill.—Samuel Egolf and E. M. Embree, reported last week as to organize a \$500,000 company for the establishment of a pulp mill in Ashland, have not as yet decided upon a definite location for the plant and will probably not locate in Ashland.

Grand Rivers—Iron Furnace.—Capitalists are negotiating for the purchase of the Grand Rivers Furnace Co.'s property, and if deal is concluded the iron furnace will be put in operation.

Kentucky—Tobacco Company.—The Kentucky Tobacco Product Co. has been incorporated under New Jersey laws, with a capital stock of \$1,000,000, for the purpose of manufacturing and dealing in tobacco. C. E. Halliwell, vice-president of the Continental Tobacco Co. of New York, is one of the incorporators.

Louisville—Garbage Crematory.—The city will open bids next week for the erection of a 100-ton garbage crematory; Thomas P. Craig, secretary of board, can be addressed.*

Louisville—Furniture Factory.—A. Koop & Sons will enlarge their furniture factory.

Louisville—Electric-power Plant.—The Kentucky Heating Co. is figuring on the erection of a plant to supply electricity in the central part of the city, power to be furnished by gas engine driven by natural gas; Donald McDonald, president.*

LOUISIANA.

Hammond—Cotton Mill.—Efforts are being made for the organization of a stock com-

pany to erect a cotton mill; about \$20,000 has been subscribed. Address W. E. Libby for particulars.

New Orleans—Mercantile.—Ernst Rudolph Gogreve, Henry Bentz, William A. Gogreve and others have incorporated as H. R. Gogreve, Limited, to conduct a merchandize business; capital stock \$40,000.

New Orleans—Flour Mill.—The New Orleans Progressive Union, Limited, C. L. Brackett, secretary, has taken up the question of establishment of a flour mill, and active steps will be taken in this direction.*

New Orleans—Cotton Mill.—A special committee of the New Orleans Progressive Union, Limited, has been appointed to secure subscriptions to build and operate the cotton mill reported in our last issue. The capital stock will be \$500,000, and as soon as \$200,000 of this amount has been secured active work will be begun on the erecting and equipping of the mill; C. L. Brackett, secretary.

Shreveport—Ice Factory.—The Shreveport Ice & Refrigerating Co. will erect a 100-ton ice factory; building and machinery will cost \$70,000.

St. Francisville—Cotton Mill.—L. P. Kibourne, Thomas Butler, J. F. Irvine, E. L. Newsham, W. R. Pharis, Dr. H. Lofton, N. H. Barrow and others have been appointed a committee to investigate the organization of a stock company for the erection of a cotton mill.

MARYLAND.

Baltimore—Reservoir.—The Chesapeake Electric & Water Co. of Baltimore county has awarded contract to Frank Long of Canton, Baltimore, Md., for the excavating work for the reservoir which the company has decided to construct at Herring Run. Miller Bros. of Highlandtown have contract for brick work; reservoir will have capacity for 4,000,000 gallons of water and cost between \$18,000 and \$20,000.

Baltimore—Chemical Preparations and Druggists' Supplies Factory.—Harry A. Weaver, Edward E. Weaver, Harry Weiden and others have incorporated the Weaver Brothers & Mott Co. for the manufacture of chemical preparations and druggists' supplies; capital stock \$10,000.

Mt. Vernon—Planing Mill.—The Pennsylvania Railroad Co. will soon award contract for the erection of a brick and stone planing mill; J. B. Hutchinson, Philadelphia, Pa., general manager.

MISSISSIPPI.

Bay St. Louis—Brick Works.—J. B. Faber will establish brick works at Chinchuba.

Canton—Oil Mill and Ginnery.—Lee Baggett of Jackson, Miss., has purchased a factory at Canton and will convert it into a gin and oil mill combined.

Clarksdale—Electric-light Plant and Water Works.—The city will hold an election on August 28 to decide the issuance of \$75,000 of bonds for water works and electric-light plant mentioned during the week. Address Walter Clark, mayor.

Sunflower County—Timber-land Development.—The Southern-Innes Co. of Greenville, Miss., has purchased for \$20,000 about 5000 acres of timber land in Sunflower county and will develop it.

West Point—Cotton Mill.—A company with a capital stock of \$100,000 has been organized for the establishment of a 5000-spindle cotton mill. W. J. Huribut of Chattanooga, Tenn., land and industrial agent of the Southern Railway, is said to be interested.

MISSOURI.

Deepwater—Mercantile.—The Deepwater Mercantile Co. has been incorporated. Nathan Frensdorf, Alfred E. Dickey and Sig. Frensdorf with a capital stock \$15,000.

Joplin—Lead and Zinc Mines.—The Kerner Mining & Milling Co. has been incorporated, with a capital stock of \$24,000. D. C. Frasier, Byron Ash, James Luke and others.

Kansas City—Bridge.—A. J. Trulock Leavenworth, Kan., has been awarded a tract to build a \$200,000 steel bridge over Red river, on the line of the Kansas City Pittsburg & Gulf Railway.

Kansas City—Lumber Company.—Bennett, C. F. Smith, W. H. Brown and Edwin Henderson have incorporated Northeast Lumber Co., with a capital stock of \$30,000.

St. Louis—Furniture and Mercantile Co.

pany.—Henry C. Doert, J. W. Jones and August Steinmeyer have incorporated the Union Furniture & Mercantile Co., with a capital stock of \$50,000.

St. Louis—Tobacco Factory.—It is reported that William S. Logan (reported last week) has purchased building and grounds for \$30,000 and is purchasing machinery for a large tobacco factory.

NORTH CAROLINA.

Albemarle—Knitting Mill.—The Winde-mer Knitting Mills (reported last week as organized) is erecting a two-story 75x100-foot building; capital stock is \$30,000, and the owners are James W. Cannon and Messrs. Webb & McGill; 300 operatives will be employed, and the capacity will be 6000 pairs hosiery per week; will have dyeing plant.

Cronly—Cotton Mill.—J. Howard Sykes is endeavoring to interest the citizens in the establishment of a 5000-spindle mill for spinning yarns.

Cumberland—Cotton Mill.—The Cumberland Cotton Mills Co. (reported last March as incorporated) is now equipping its mill; about 4000 spindles will be put in for manufacturing 8s to 12s coarse yarns, mill using 3000 pounds of cotton daily; S. H. Cotton, superintendent.

Gastonia—Electric-light Plant, Water Works, etc.—It has been decided by popular vote to issue \$65,000 of bonds (recently reported) for electric-light plant and water works. Address "The Mayor."

Greensboro—Overall and Pants Factory.—The Hunter Manufacturing Co. will increase its capacity from 300 dozen pairs of overalls and pants per week to 500 dozen pairs; other improvements will be made, including the installation of an electric-light plant, steam heat, etc.

Greenville—Commission Company.—H. P. Strause, I. C. Gary and A. H. Gary have incorporated the Greenville Warehouse Co. to conduct a general commission and warehouse business.

Hickory—Cotton Mills.—A. A. Shuford, C. Gelther, G. H. Gelther, C. H. Gelther and others are organizing a \$50,000 stock company for the erection of a cotton mill; it is also reported that a second mill is being organized by A. A. Shuford, who will either locate in town or near on South Fork river.

High Point—Furniture Factory.—The Globe Furniture Factory has installed additional machinery and will enlarge.

High Shoals (not a postoffice)—Cotton Mill. D. A. Tompkins of Charlotte, N. C., president of the High Shoals Co., recently reported as building factory, states that the company will erect a building 100x400 feet, three stories high, and start with 5000 spindles and increase the same until 12,000 are in position.

Kernersville—Woolen Mill.—J. F. Kerner and a Virginia woolen manufacturer are reported as to establish a woolen mill in Kernersville.

Kings Mountain—Cotton Mill.—D. M. Baker, P. S. Baker, J. A. Durham, C. Valera and others have incorporated the Lula Manufacturing Co., with a capital stock of \$100,000, with privilege of increasing to \$200,000, for the erection and operation of a cotton mill.

Lexington—Chair, etc., Factory.—The Central Manufacturing Co., reported last week as incorporated, will establish a factory either for the manufacture of chairs or chandeliers; J. F. Hargrave, president.

Morganton—Flour Mill.—J. W. Garrison and S. M. McDowell contemplate the establishment of a 40 or 50-barrel roller flour mill.

Morganton—Telephone Systems.—The Burke County Telephone Co. (reported during the week as incorporated) is constructing lines to connect with Lenoir and Marion; it is also the intention to construct lines to important points in Burke county; W. C. Ervin, secretary.

Mount Pleasant—Cotton Mill.—The cotton mill company reported last week as to be organized, with J. W. Cannon of Concord, president, will be known as the Tuscora Cotton Mills, and have a capital stock of \$5,000, with privilege of increasing to \$50,000.

Pitt County—Commission, etc., Company.—P. Strause of Greenville, N. C.; Sam. Strause of Des Moines, Iowa, and others have incorporated as Strause Bros. to conduct a general commission and warehouse business in Pitt county and elsewhere.

Raleigh—Copper Mines.—D. W. Whitaker and others have purchased copper mines near Raleigh, and will organize a \$35,000 stock company for their development.

Rutherfordton—Broom Factory.—The es-

tablishment of a broom factory is contemplated. Address J. F. Rowland, chairman board of improvement.*

Rutherfordton—Furniture Factory.—Efforts will be made for the establishment of a furniture factory, the citizens taking \$5000 of the stock. Address J. F. Rowland, chairman board of improvement.

Shelby—Monazite Deposits.—L. U. Campbell has purchased the monazite deposit lands of Eph. White, near Shelby, and will install new machinery for extensive developments; machinery will include a crusher with a capacity of seventy-five tons; forty operatives will be employed.

Smithfield—Tobacco Factory.—The Woodward Tobacco Co. of Springhope, N. C., will establish a stemmery in Smithfield.

Springhope—Stemmery.—The Woodward Tobacco Co. has been organized to erect and operate stemmeries at Springhope and Smithfield; S. A. Woodward is president; F. C. Chamberlain, general manager, and A. B. Willingham, secretary.

Winston—Tannery.—It is reported that Colonel Stockton of Winston or W. A. Blair can give information of the reported \$80,000 tannery to be erected at Winston.

SOUTH CAROLINA.

Abbeville—Flour Mill.—Efforts will be made for the organization of a stock company for the erection of a roller flour mill; it is probable that electricity will be adopted as the motive power. Address J. R. Blake.

Arlington—Cotton Mills.—The Arlington Cotton Mills (reported last week as incorporated, etc.) has secured the old Walker & Miller cotton mill, operating 1900 spindles and thirty-six looms, and will improve it, installing new machinery, etc.; will be entirely a weaving mill, and later on a large spinning mill will be erected.

Arlington—Cotton Mill.—The Arlington Cotton Mills (reported last week as incorporated, etc.) has secured the old Walker & Miller cotton mill and will enlarge it by the erection of a 100-foot addition, installing 3500 spindles and 200 looms; George T. Walker, superintendent.

Central—Cotton Mill.—Capt. William Hunter, Jr., is endeavoring to organize a company for the establishment of a cotton mill; \$50,000 has already been subscribed.

Charleston—Water Works.—J. C. Ludlow, engineer, has made surveys and is preparing plans for construction of new water-works plant and laying mains which will cost about \$1,250,000; it will require four large pumps to supply the city, the minimum amount to be 8,000,000 gallons per day. The city will not own the water works, but will make contract with the company that builds it to supply the city for a number of years. As soon as plans are completed bids will be called for and work on plant commenced. Address "The Mayor."

Clover—Cotton Mill.—The Clover Cotton Manufacturing Co. will triple the capacity of its mill; present equipment 6000 spindles.

Easley—Bobbin and Shuttle Plant.—Thos. K. Hudgens contemplates the establishment of a bobbin and shuttle plant.*

Edgefield—Cotton Mill.—The Edgefield Manufacturing Co. is installing fifty new looms.

Florence—Water Works.—The city will hold an election to decide the issuance of \$25,000 of bonds for construction of system of water works, including thirty hydrants, a high steel tower and tank of 80,000 gallons capacity. Address "The Mayor."

Lancaster—Cottonseed-oil Mill and Fertilizer Factory.—A cottonseed-oil mill, fertilizer factory and flour mill, all under one management, will be established. Names of interested parties will be announced later.

Mayesville—Cotton-oil and Flour Mills.—Strauss & Atkins have about completed a glunery and will erect a large flour mill and cottonseed-oil mill.

Mullins—Tobacco Company.—The Mullins Tobacco Co. has been incorporated for the purpose of dealing in leaf tobacco by E. O. Thornton, B. G. Smith, E. O. Bransford and others; capital stock \$10,000.

Ridge Spring—Canning Factory.—F. G. Asbill has established a canning factory.

Salem—Flour Mill.—Thomas A. Grant has placed orders for machinery for flour mill.

Walhalla—Flour Mill.—William J. Stribling is remodeling his burr flour mill.

TENNESSEE.

Bristol—Zinc Mines.—R. A. Bowie has optioned and will develop zinc ore properties in Scott county, Virginia, as reported recently.*

Chattanooga—Hay-press Factory.—The Chattanooga Implement & Manufacturing

Co. of East Chattanooga has purchased the business of the Chickamauga Hay Press Co., including patents, etc., and will manufacture the Chickamauga hay press on a large scale.

Columbia—Phosphate Mines.—Smith Bros. of Birmingham, Ala., and a number of Maury county parties have leased mining privileges on the Howard phosphate farm, near Columbia, and organized the Howard Phosphate Co., with a capital stock of \$50,000, for developing the property.

Covington—Cotton Mill.—The company reported last week as to be organized with a capital stock of \$100,000 for the erection of a cotton mill will be chartered as the Tipton Cotton Mills. A committee has been appointed to secure site for erection of the plant. Address J. C. Boals, J. H. Filppin or W. V. McFadden, who are interested.

Gallatin—Phosphate Mines.—The Sumner County Phosphate Co. (recently reported as incorporated) has purchased 1364 acres of phosphate land and will begin developments.

Knoxville—Marble Quarries.—The United States Marble Co. of Cincinnati, Ohio, has purchased for \$25,000 the Cedar Bluff marble quarries near Knoxville and will operate.

Memphis—Land Company.—Wm. I. Cole, R. W. Mitchell, L. W. Dutton and others have incorporated the Lenox Land Co. of Shelby county, with a capital stock of \$12,000.

Memphis—Paper Box and Manufacturing Company.—The Merchants' Paper Box & Printing Co. has been incorporated with a capital stock of \$40,000.

Memphis—Cotton and Ginning Company.—The Foster-Robinson Cotton & Ginning Co. has been incorporated with a capital stock of \$17,000.

Nashville—Bread Bakery.—The American Bread Co., 619 Church street (reported last week as incorporated), is erecting a bread bakery with a daily capacity of 20,000 loaves; machinery has all been purchased.

Oakplain—Saw Mill.—John Browning will rebuild his saw mill reported burned.

Ooltewah—Powder Factory.—The Chattanooga Powder Co., Charles G. Sherman, president, will install new machinery to enlarge its plant; present capacity 1000 kegs of blasting powder per day.

Petros—Coal Mines.—George P. Howard of Atlanta, Ga., has purchased the properties and plant of the Crooked Fork Coal Co. at Petros and will inaugurate extensive improvements and increased facilities at once.

Pickel—Flour Mill.—E. G. Pickel is remodeling his flour mill.

Pine Bluff—Flour Mill.—W. R. Blanks contemplates the erection of a new roller mill. All communications should be addressed to Charles R. Blanks, Rock Island, Tenn.*

Pulaski—Flour Mill.—Duncan & Co. will rebuild their flour mill, reported burned; capacity 200 barrels of flour and 1000 bushels meal.

Winchester—Road Improvements.—The citizens will hold a meeting to discuss the advisability of issuing \$100,000 of bonds for building pikes in Franklin county. Address "The Mayor."

TEXAS.

Beaumont—Cotton Mill.—Hamilton Myers and several New York capitalists are in correspondence with Mayor D. P. Wheat relative to the establishment of a \$200,000 cotton factory, to employ 250 operatives, in Beaumont.

Bonham—Laundry.—Chartered: The City Steam Laundry, to establish and operate a laundry; capital stock \$2000; incorporators, J. L. Buchanan, R. E. Kincaid and Braz Biggerstaff.

Calvert—Bridge.—It is reported that a bridge will be constructed across the Brazos river. Address William McIntosh.

Carrizo Springs—Mineral-water Company. The Carrizo Springs Mineral Water Co. has been incorporated, with a capital stock of \$80,000, to conduct a general mineral-water business, by J. A. Dougherty, E. J. Larkin and A. E. Hilton.

Dallas—Land and Cattle Company.—The H. D. Lindsley Land & Cattle Co. has been incorporated, with a capital stock of \$10,000, by Henry D. Lindsley, John T. Jones and Charles A. Rasbury.

Dallas—Water Works and Street Improvements.—The city will issue \$200,000 of water works and street improvement bonds. Address "The Mayor."

El Campo—Cotton Compress.—The Isaacson Gin Co. has established a round-bale cotton compress, as lately reported.

El Paso—Commercial Company.—John A. Merrill, J. J. Munday and others have incorporated the El Paso Commercial Co., with a capital stock of \$10,000.

Farmersville—Cotton-oil Mill.—The Farmers' Cotton Oil Co. has been incorporated, with a capital stock of \$60,000, to erect and operate a cottonseed-oil mill; incorporators, Hugh Halsell, A. B. Scarborough and J. J. Culbertson.

Fort Worth—Grain Elevator.—St. Louis (Mo.) parties will erect, it is reported, a 150,000-bushel grain elevator in Fort Worth; G. C. Montcastle of St. Louis, Mo., said to be interested.

Gainesville—Cattle Company.—Chartered: The Panhandle Cattle Co., with a capital stock of \$10,000, by C. C. Hemming, P. S. Witherspoon and P. S. Witherspoon, Jr.

Gainesville—Cotton Gin, Compress, etc.—J. C. Whaley, James Beattie and P. S. Witherspoon have incorporated the Red River Warehouse & Gin Co., to conduct a general gin, compress and warehouse business; capital stock is \$30,000.

Grand View—Cotton Mill.—T. E. Pittman will endeavor to form a company to build a cotton mill, investing from \$50,000 to \$100,000. The monthly-installment plan of payment for stock will probably be followed. Manufacturers of cotton-producing machinery are invited to send information, estimates, etc.*

Hillsboro—Distillery.—A distillery with twelve malt tubs of 120 gallons each and one double still is being established. Names of interested parties will be announced later.

Houston—Bridge.—The city engineer will prepare plans and specifications for a bridge across White Oak bayou. Address "The Mayor."

Houston—Delinting Plant.—A plant for the delinting of cottonseed by the process invented by Prof. F. C. Thiele is to be established in Houston. It is said that a company has been organized to operate the plant and will apply for charter.

Jefferson—Iron Furnace, etc.—Nashville (Tenn.) capitalists have purchased the property of the Jefferson Iron Co. and will put the furnace in condition for operation; it is a modern 80-ton furnace and expected to be in operation in sixty days, employing 250 operatives; A. P. Gaines, late of South Pittsburg, Tenn., will be general manager.

Navasota—Cotton Mill.—J. J. Felder contemplates locating a 10,000-spindle cotton mill.*

Richmond—Gin and Compress.—The Richmond Cotton Co. has been incorporated to conduct a general gin and compress business by C. A. Beasley, A. A. Bailey, R. A. Ransom and others; capital stock \$16,000.

Richmond—Electric-light Plant.—The Richmond Electric Co. has been incorporated, with a capital stock of \$4000, to construct and operate an electric-light plant, by C. A. Beasley, A. A. Bailey and R. F. Ransom.

Rusk—Foundry and Machine Shops.—The Kavanaugh Foundry & Manufacturing Co., lately reported as incorporated, has erected foundry and machine shop 40x150 feet, besides boiler, engine, cleaning and rattler rooms; 150 to 175 operatives will be employed; F. Kavanaugh, manager.

Sherman—Cotton Mill.—The erection of the cotton mill reported last week is not as yet an assured fact. Address J. J. Littlejohn of Jonesville, S. C., who is interested.

Sherman—Candy Factory.—The Sherman Candy Manufacturing Co. has been incorporated, with a capital stock of \$8000, by C. F. Jackson, Allen M. McBee, M. T. Lee and others.

Victoria—Brick and Tile Company.—Chartered: The Victoria Brick & Tile Co., by F. B. Lander, T. A. Heath, J. M. Bronson and others; capital stock \$8000.

VIRGINIA.

Bristol—Coke Ovens.—It is reported that the Virginia Iron, Coke & Coal Co. has purchased the Looney creek coal mines of the Interstate Coal Co. for \$500,000, and will erect 500 coke ovens. The coke will be used in the fourteen iron furnaces controlled by the company in East Tennessee and Southwest Virginia.

Buena Vista—Clay Works.—The Southern Clay Product Co. has been incorporated, with a minimum capital of \$200,000, for the purpose of operating the clay works and property formerly owned by the Buena Vista Fire Clay & Roofing Tile Co. Cyrus Borgner of Philadelphia, Pa., is president; Samuel L. Kent of Clifton Heights, Pa., secretary and treasurer; these with A. Timberlake and C. B. Guyer of Buena Vista, Va., compose the board of directors.

Clifton Forge—Harness Factory.—Joseph L. Helms, W. C. Moody and Walter K. Smith have formed the Clifton Harness Co. for the establishment of a harness factory.

Goshen—Mineral-land Development.—The

Empire Steel & Iron Co., Empire Building, New York (reported last week), has purchased the mineral right on 324 acres near Goshen from L. T. Leech for \$8000; property contains brown hematite iron ore, and the company proposes to open mines and use the ore in its Victoria furnace, which will go into blast next month.

Lebanon—Silver and Zinc Mines, etc.—L. D. Crawford of Mendota and W. B. Stockton of Irondale have leased a 60-acre tract of land in the Copper Creek district for mining purposes; upon the survey has been found coal, iron, zinc and silver.

Norfolk—Sewerage.—The city has awarded contract to Guild & Co. of Chattanooga, Tenn., for construction of proposed sewerage system to cost \$14,000.

Petersburg—Cotton Mills.—The Pocahontas Mills is erecting a three-story addition 53x70 feet, in which will be installed 1500 spindles and other machinery.

Richmond—Cigar Factory.—The S. P. Martin Cigar Co., lately reported as incorporated, will succeed to the business formerly conducted by S. P. Martin.

Staunton—Condensed-milk Plant.—It is reported that O. K. Lapham will establish a \$30,000 condensed-milk plant.

WEST VIRGINIA.

Cedar Cliff—Cement Works.—The Cumberland Valley Cement Co., lately reported as having purchased the Cedar Cliff Cement Works, will erect, it is reported, a new plant of 400 barrels per day capacity.

Clarksburg—Oil Lands.—The Independent Oil Co. has been incorporated, with a capital stock of \$50,000, by R. T. Lowndes, Chas. Goff, Chas. M. Hart and others.

Clarksburg—Window-glass Works.—A number of capitalists of Belle Vernon, O., who are to incorporate the Lafayette Window Glass Co., propose to erect at North View a window-glass factory, employing from sixty to seventy-five operatives. The Pine Grove Manufacturing, Land & Improvement Co. can give information.

Fairmont—Coal Mines.—Henry G. Davis and S. B. Elkins have purchased 10,000 acres of coal land between Fairmont and Morgantown and will develop it. This was reported last week as having been purchased by the Davis (W. Va.) Coal & Coke Co.

Huntington—Hardware Company.—The Emmons-Hawkins Hardware Co. has been incorporated, with an authorized capital of \$100,000, by C. D. Emmons, J. L. Hawkins, E. V. Carter and others.

Maysville—Flour Mill.—W. P. Hollen will erect a new roller-process flour mill.

Mill Creek (not a postoffice)—Tannery.—Eugene Horton of New York and T. S. Pownall of Cumberland, Md., have decided, it is reported, to establish a tannery at Mill Creek.

Mt. Clare—Coal Lands.—It is reported that New York capitalists have purchased the John Latstetter coal lands at Mt. Clare for \$45,000 and will operate extensively.

Parkersburg—Oil-land Development.—Charles B. Shafer of Pittsburg, Pa., has purchased the leases of R. B. Hur & Co. of Pittsburg in the Jackson Ridge-Keemer sand territory near Parkersburg for \$150,000; this property covers over 400 acres, and has twenty-two producing wells; output is 225 barrels of oil per day.

Point Pleasant—Saw Mill.—The Enterprise Marine Dock Co. has purchased the saw and planing mill of Capt. John L. Charles, which it will improve and operate.

Randolph County—Coke Ovens.—The Davis (W. Va.) Coal & Coke Co. will construct a battery of eighty coke ovens in Randolph county.

Shinnston—Coal Lands.—It is reported that J. E. Sands of Fairmont, W. Va., has purchased 2000 acres of coal land on Shinn run, Harrison county, for \$50,000. It is also stated that this property is for Senator Johnson N. Camden, who has organized a syndicate to take up all the coal in the Fairmont region not now held by mining companies.

Terra Alta—Woolen Mill.—John D. Rigg and others have incorporated the Terra Alta Woolen Mills Co., with a capital stock of \$1000.

Thomas—Coal Mines, etc.—The Davis (W. Va.) Coal & Coke Co. contemplates additional ovens and extension of mines at Thomas, as lately reported, but no definite plans have yet been adopted; J. W. Galbreath, general superintendent.

Wheeling—Bridge and Machine Works.—The Riverside Bridge and Machine Works has been incorporated for the establishment and operation of machine works by C. L. Dickinson and others; capital stock \$100,000.

BURNED.

Bridgeport, Ala.—W. J. Wallace's saw mill; estimated loss \$4000.

Denton, Texas.—W. E. Smith's cotton gin, near Denton; estimated loss \$5000.

McKinney, Texas.—The Collin County Mill & Elevator Co.'s plant; estimated loss \$90,000.

Oakplain, Tenn.—John Browning's saw mill.

Pulaski, Tenn.—Duncan & Co.'s flouring mills; estimated loss \$25,000.

Red Springs, N. C.—W. J. McDiarmid's planing mill; estimated loss \$5000.

Shreveport, La.—The Colquitt cotton gin.

Statesville, N. C.—Robert Gallier's saw mill.

BUILDING NOTES.

Academy, W. Va.—Church.—W. A. Cann of St. Louis, Mo., has prepared plans and Joseph Knapp has received contract for the erection of the Methodist church, to be of frame, 48x93 feet, and cost \$3300.

Americus, Ga.—Depot.—The Central Railroad Co. has awarded contract to the Macon Sash, Door & Lumber Co. for the erection of a \$15,000 brick and granite depot.

Atlanta, Ga.—Hotel.—Plans are being prepared for converting the Moore-Marsh Building into a hotel, to have all modern conveniences; improvement will cost \$25,000. Address Captain Draper.

Austin, Texas.—School Building.—The board of trustees of public schools will advertise for bids on the erection of proposed high-school building, which will be four stories, 170x86 feet, of pressed brick and stone, with stone trimmings and slate roof, and cost \$45,000. McDonald & Gordon prepared the plans.

Baltimore, Md.—Bank Building.—D. W. Thomas has contract for erection of the new Union Bank building, which will cost \$120,000; it will be a one-story building, 50x112 feet.

Birmingham, Ala.—Dwellings.—The Ensley Land Co., D. J. McCombs, president and general manager, will have plans made by Albert Buchman of New York for the erection of several hundred dwellings to be built at Ensley City.

Cumberland, Md.—Business Building.—Habit & Stegmaler will erect a three-story business building.

Denton, Texas—Residence.—F. M. Craddock will erect a \$5000 residence.

Edgefield, S. C.—Cottages.—The Edgefield Manufacturing Co. will erect five operatives' cottages.

Gastonia, N. C.—Church.—The Methodists will erect a new church to cost \$12,000, and architects who wish to bid on making plans, etc., can address Geo. A. Gray.

Griffin, Ga.—Business Building.—A two-story brick building is being erected for the Griffin Buggy Co.

Huntsville, Ala.—School Building.—The city will issue \$20,000 of bonds for erection of a new school building. Address "The Mayor."

Jacksonville, Fla.—Warehouse.—A one-story brick warehouse for the freight department of the Atlantic, Valdosta & Western Railroad Co. will be erected in Jacksonville.

Louisville, Ky.—Building.—A. J. Ross will make further additions and improvements to the Rossmore Building at a cost of \$20,000.

Louisville, Ky.—Police Station and Engine-house.—Harry McDonald has made plans for branch police station for the city to cost \$7500; also for engine-house to cost \$7500. Address "The Mayor."

Marshall, Texas—Courthouse.—Sonnefeld & Simmins of Dallas, Texas, have contract at \$94,169 for erection of courthouse at Marshall to replace one recently burned; building will be three stories, heated by steam, have electric lights, built of granite and buff pressed brick with stone trimmings.

Miami, Fla.—Buildings.—Contractor Woodworth has contract for the erection of the John Kroninwitter Block, to be of brick, 24x55 feet. It is also reported that a large two-story building will be erected for town hall and fire department. Address "The Mayor."

Millen, Ga.—Hotel.—W. S. Godbee is having plans made by L. F. Goodrich of Augusta for the erection of a hotel.

Raleigh, N. C.—Business Building.—John W. Lee will erect a two-story brick business building.

Salisbury, Md.—Bank Building.—The Farmers and Merchants' Bank will erect a bank building.

Salisbury, Md.—Business Block.—Jackson

Bros. Co. has contracted for the erection of a handsome business office in South Salisbury, to contain four rooms and a large fire-proof vault; T. H. Mitchell has contract.

Seranton, Miss.—Jail.—Contract has been awarded at \$8865 for the erection of the jail reported last week. F. B. & W. S. Hull of Jackson, Miss. (who were mentioned last week as having received contract), are agents of the Pauly Jail Building & Manufacturing Co. of St. Louis, Mo.

Tennille, Ga.—Hotel.—The Pritchard estate has awarded contract for erection of a \$15,000 hotel.

Washington, D. C.—Hotel.—It is reported that site will be purchased for \$183,420 for the erection of a twelve-story, 500-room fire-proof hotel to cost \$1,000,000. Senator Wm. M. Stewart of Nevada and Senator Clarence D. Clark of Wyoming and New York capitalists are said to be interested.

Washington, D. C.—Buildings.—Permits issued: To the trustees Fourth Presbyterian Church for five one-story brick buildings 128x50 feet, flat tin roof, cost \$9000; to National Hotel Co. for repairs to cost \$6000; to C. F. Smithson for two two-story brick dwellings, with press-brick fronts, flat tin roof, latrobe heat, cost \$3600; to Benjamin F. Hunt for two-story frame dwelling, with pitch slate roof, hot-water heat, cost \$4000; to Margaret Magan for three three-story dwellings, with press-brick fronts, slate and tin roof, furnace heat, cost \$12,000; to L. E. Brunner for repairs to cost \$8000; to German Baptist Brethren for one-story-and-basement church 40x62 feet, brick, Indiana limestone and granite, pitch slate roof, steam heat, cost \$6500.

Wilmington, N. C.—School.—Capt. Ed Wilson Manning, county superintendent of public instruction, advertises for bids for erection of new school building. Plans and specifications may be seen at office in courthouse.

RAILROAD CONSTRUCTION.

Railways.

Alexandria, La.—It is reported that work for the completion of the Natchez, Urania & Ruston Railway from Urania to Ruston, sixty miles, and from Urania to Natchez, Miss., sixty-two miles, will be pushed.

Austin, Texas.—Survey of the proposed Colorado, Texas & Mexican Railroad has been completed from Haskell to Llano, Texas, a distance of more than 200 miles.

Birmingham, Ala.—It is announced that Charles D. and Walter Smith have secured the contract to build a six-mile spur for the Illinois Central Railroad at Greenwood, Miss.

Bristol, Tenn.—Bids will be received until September 1 by A. J. Dull for construction work on a narrow-gauge road ten or twelve miles long from Fish Dam to Shady Valley, Tenn.

Bristol, Tenn.—It is announced that Chief Engineer Robert Gray will receive bids until September 1 for preliminary work on ten or twelve miles of the Shady Valley Railroad, from Big Creek Park, Tenn.

Charleston, S. C.—It is reported that terminals of the Augusta & Charleston line of the Seaboard Air Line will be on the western water front of the city.

Columbia, S. C.—Grading of the Seaboard Air Line between Camden and Columbia will be under way within a few days.

Cullman, Ala.—The Louisville & Nashville Railroad has petitioned the city council for right to build a spur track to the property of the Cullman Cotton Co.

Cumberland, Md.—A survey is in progress to determine the best route for a connection between the West Virginia Central & Pittsburg Railway and the branch line of the Chesapeake & Ohio Railway, now building from Caldwell, W. Va., up the Greenbrier valley.

Dawson, Ga.—The Board of Trade is making an effort to have Dawson made a northern terminus of the Georgia Pine Railroad.

Florence, S. C.—Citizens of Florence and of Darlington will make an effort to have the Seaboard Air Line construct a road thirty-five miles long from Cheraw to Florence by way of Darlington.

Fort Worth, Texas.—It is reported that work on an extension of the Gulf, Beaumont & Kansas City Railroad from Jasper, Texas, to Rogan, fifteen miles, will be commenced within fifteen days.

Frederick, Md.—Surveys for the Frederick, Thurmont & Northern Electric Railroad will be continued from Emmitsburg, Md., to Gettysburg, Pa.

Georgetown, S. C.—A preliminary survey has been finished for the road of the Atlantic Coast Lumber Co. from Georgetown

to Marion, with a possibility of a connection with the Carolina Northern.

Greensboro, N. C.—It is reported that the Seaboard Air Line is contemplating the construction of a road from Pittsboro up Haw river to Greensboro.

Little Rock, Ark.—It is announced that the contract for grading the Little Rock, Hot Springs & Western Railroad between Denton and Hot Springs has been awarded to Peter Cassidy, and that contracts for the twenty-three miles of construction will be let shortly.

Little Rock, Ark.—Preliminary surveys have begun from Fayetteville to Stillwell for the North Arkansas, Tallequah & Western Railroad.

Louisville, Ky.—It is reported that the Illinois Central Railroad will build from Switz City, Ind., to Louisville, making an air line from Louisville to Effingham, Ill.

Murfreesboro, Tenn.—Thirteen miles from Rockwood westward of the proposed Tennessee Eastern & Western Railroad are ready for construction surveys.

Natchitoches, La.—Bids have been invited by the Natchitoches & Grand Ecor Bridge Co. for plans for a central track railroad and traffic bridge to be built across Red river, near Grand Ecor.

Newton, N. C.—It is reported that the Carolina & Northwestern Railroad will be changed to standard gauge.

Raleigh, N. C.—The survey of the Raleigh & Eastern Railway, twenty miles long, from Raleigh to Wake or Johnston county, is to begin at once.

Richmond, Va.—It is reported that preparations are being made to double track the Richmond, Fredericksburg & Potomac Railroad from Richmond to Quantico.

Savannah, Ga.—The Georgia & Alabama Railway will, it is announced, petition the city council for a right of way through the old Springfield plantation to the site of the proposed union passenger depot.

Sherman, Texas.—Representatives of the owners of the projected St. Louis, Oklahoma & Southern Railway are preparing for a survey of the route from Sherman to Willis Ferry, on Red river. The Mississippi Valley Trust Co. of St. Louis proposes to construct the line.

Smithville, Ga.—It is reported that Mr. J. T. Smith has secured all rights for the Augusta & Valdosta Railroad and will begin the survey at once.

Stanford, Ky.—The city council is considering a proposition for a bonus of \$10,000 for the construction of a railroad from Rowland to McKinney.

Staunton, Va.—Gooch, Rinehart & Dennis have been given the contract for the construction of a railroad from Covington eight miles to ore property on Potts creek.

Stoneham, Texas.—The survey of the Texas Northern Railroad has been completed from Anderson to Stoneham.

Wharton, Texas.—Work on the extension from Bonus southward of the Cane Belt Railroad will, it is reported, begin within a few days. Grading on the line from Eagle Lake to Sealy has been practically finished.

Street Railways.

Annapolis, Md.—The city council has before it a proposition looking to the construction of a street railway in the city.

Frederick, Md.—The Frederick, Thurmont & Northern Electrical Railroad is seeking a franchise to run on the principal portion of Market street, Frederick.

New Albany, Ky.—The New Albany Electric Street Railway Co. proposes to make extensions through the city to the fair grounds.

San Antonio, Texas.—Plans are making for the construction by the San Antonio Street Railway Co. of a belt line for the accommodation of visitors to the fair at that city in the fall.

Savannah, Ga.—Arrangements are being made to place the Suburban & West End Street Railroad in running order as a trolley line.

St. Louis, Mo.—The St. Louis, Clayton & St. Charles Railway Co. has been incorporated, with a capital stock of \$50,000, to build a street railway in St. Louis, Mo.

Wheeling, W. Va.—The right has been granted permitting the Wheeling & Elm Grove Railway Co. to construct double tracks from the foot of Pryor's Hill through Elm Grove.

"The Mechanic."—Such is the title of a monthly journal of mechanics, science and literature issued by the H. B. Smith Machine Co. of Smithville, N. J. This company continues to supply its customers with the most improved woodworking machines.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Artesian Wells.—See "Water Works, etc."
Barrel Manufacturers.—Cherokee Ochre & Barytes Co., Atlanta, Ga., wants addresses of barrel manufacturers.

Barrels and Supplies.—Sherman Cooperage Co., Sherman, Texas, would like to correspond with manufacturers of slack-work staves, including flour and apple barrels, material for candy and jelly buckets.

Robbin and Shuttle Machinery.—Thos. K. Hudgens, Easley, S. C., wants prices on robbin and shuttle machinery.

Boiler.—Crisfield Ice Manufacturing Co., Crisfield, Md., wants a 100-horse-power return tubular boiler.

Boiler.—See "Piping, etc."

Boiler and Engine.—T. W. Holden, Hillsboro, N. C., wants to purchase a 25-horse-power boiler and engine.

Boiler and Engine.—York Manufacturing Co., Audubon, N. J., is in the market for a second-hand 25 or 30-horse-power engine and boiler.

Boiler and Engine.—W. V. Tennent, Albert P. O., West Virginia, will soon be in want of a second-hand boiler and engine of from twenty to forty horse-power.

Boilers.—See "Starch Factory."

Brick Paving.—Julian Kendrick, city engineer, Birmingham, Ala., will receive sealed proposals until September 6 for about 18,000 square yards of vitrified brick pavement. Each bid must be accompanied by certified check for \$1500, made payable to the mayor and aldermen. Specifications may be obtained at above office. Usual rights reserved.

Bridge.—John T. Harvey, Quincy, Fla., is in the market for an iron bridge fifty feet long for public road.

Bridge.—Bids will be opened September 11 for the construction of a steel and iron bridge complete, for excavations, foundations and masonry abutments; also for steel and iron superstructure for a two-span bridge. Plans and specifications now on file with county clerk. Address James McQuin, president commission, Wayne, W. Va. (or see advertisement in Manufacturers' Record).

Bridge.—J. R. K. Bell, chairman of commissioners, Pulaski City, Va., will receive sealed proposals until September 16 for construction of a steel highway bridge across New river, at Towes Ferry, in Pulaski county; it will be three spans of 147 feet each and 200 feet of wooden or steel approaches; width, sixteen feet in clear; height of floor, thirty feet above mean low water; piers of stone masonry or of steel cylinders filled with concrete. Each bidder to furnish plans and specifications.

Broom Machinery.—J. F. Rowland, chairman board of improvement, Rutherfordton, N. C., wants to correspond with manufacturers of broom machinery.

Broom Machinery and Supplies.—Thomas F. Jones, M. D., Lock Box 264, Cartersville, Ga., wants to purchase implement for cleaning seed from broom corn, also machinery for manufacture of brooms; also wants prices of brush (baled) and of seed, etc.

Cannery Supplies.—See "Labels."

Carpet-cleaner.—The Hayes Carpet Cleaning Machine Co., Birmingham, Ala., wants to place agencies for disposing of its devices.

Clocks.—Weld & Neville, Houston, Texas, want to communicate with manufacturers of watchmen's clocks.

Conveying Machinery.—W. J. C., care of Manufacturers' Record, Baltimore, Md., wants locomotive crane, capacity from ten to twenty-five tons.

Cotton Mill.—J. A. McKinstry, Wyeth City, Ala., wants information regarding cotton manufacture, estimates on machinery, etc.

Cotton Mill.—T. E. Pittman, Grand View, Texas, wants to correspond with manufacturers of cotton-mill machinery.

Cotton-mill Machinery.—J. J. Felder, Nava-sota, Texas, wants to correspond with manufacturers of cotton-mill machinery.

Cotton-mill-supplies Machinery.—See "Robbin and Shuttle Machinery."

Crematory.—Sealed proposals will be received at the office of the board of public works until August 29 for the construction and equipment of a 100-ton daily capacity garbage crematory. Bidders to furnish plans and specifications necessary to explain the system offered by them. Usual rights reserved; Thomas P. Craig, secretary of board, Louisville, Ky.

Dredge.—Sealed proposals for hire of dredge for improving Sabine and Neches rivers, Texas, will be received until September 21. Information furnished on application; James B. Quinn, major engineers, Custom-house, New Orleans, La.

Dredging.—Sealed proposals will be received in triplicate until September 18 at U. S. Engineer Office, Wilmington, Del., for dredging in Choptank, Chester, Manokin, Pocomoke and Warwick rivers, Maryland, and Broad creek and Nanticoke river, Delaware; information furnished on application; Wm. F. Smith, United States agent.

Dredging, etc.—Sealed proposals for improving Calcasieu river and pass, Louisiana, will be received until September 21. Information furnished on application; James B. Quinn, major engineers, United States engineer, Custom-house, New Orleans, La.

Drilling Outfit.—W. C. Chancellor, Vincennes, Ind., desires complete oil-well-drilling outfit.

Dry-kilns.—See "Starch Factory."

Electrical Machinery.—W. H. Lamont, Manistee, Ala., wants to correspond with manufacturers of electric motors for the transmission of power to take the place of belts.

Electric-light Plant.—R. A. Houston, De-witt, Ark., wants to purchase electric-light plant, including 300 or 400 16-candle-power lamps and four arc lights of 300 candle-power each; 11,500 feet of wire and 3000 feet of insulated wire.

Electric-light Supplies.—William Derelny, Big Springs, Texas, wants the addresses of firms who handle or manufacture supplies for electric-light plants.

Electric Plant.—See "Starch Factory."

Elevator.—See "Heating Apparatus, etc."

Engine.—See "Railway Equipment."

Engine.—The Morristown Electric Light Co., Morristown, Tenn., is in the market for a 100-horse-power engine.

Engine.—A. C. Moreland, Forsyth, Ga., is in the market for a 4 to 10-horse-power mounted engine.

Engines.—Kentucky Heating Co., Donald McDonald, president, Louisville, Ky., wants to correspond with manufacturers of gas engines of 200 horse-power.

Fertilizer Factory.—The Macon Hide & Tallow Co., Macon, Ga., will need machinery for fertilizer factory and tallow refinery.

Flour Mill.—J. W. Garrison and S. M. McDowell, Morganton, N. C., want to purchase machinery for a 40 or 50-barrel roller-process flour mill.

Flour-mill Machinery.—Charles R. Blanks, Rock Island, Tenn., wants to correspond with manufacturers of flour-mill machinery.

Flour-mill Machinery.—S. W. McAlexander, Carlisle, Ky., wants to buy a second-hand double roll to grind middlings and a bran duster.

Flour-mill Machinery.—New Orleans Progressive Union, Limited, C. L. Brackett, secretary, New Orleans, La., wants to communicate with manufacturers of flour-milling machinery.

Gas Engines.—See "Engines."

Gearing.—J. T. Gilbut, Box 136, Eufaula, Ala., wants addresses of parties who make gearing of brass, cast iron or malleable iron.

Handle Machinery.—See "Woodworking Machinery."

Heating Apparatus, etc.—Bids will be received at the office of Alfred Giles, architect, San Antonio, Texas, until September 12 on hot-water heating, hydraulic elevator and plumbing for the San Antonio Loan & Trust Co.'s building. Plans and specifications can be seen at the office of the "Engineering Record," in New York, and at office of Alfred Giles.

Hoisting Engine.—See "Railway Equipment."

Ice Machinery.—Cornett & Newman, New Martinsville, W. Va., want estimates on cost of ice plant.

Insulator Holders.—See "Woodworking Machinery."

Ironworking Machinery.—Sprout, Waldron & Co., Muncy, Pa., are in the market for a

new or second-hand 42x42 planer, 12-foot bed.

Labels.—E. N. Davenport Canning Co., Acworth, Ga., wants price-list and sample of labels for two and three-pound cans.

Lime-kiln.—W. J. Bennett & Co., Huntsville, Ala., want estimates on the cost of establishing a 100-barrel lime-kiln and on all castings and iron work for same.

Lock and Dam.—Sealed proposals for building lock and dam No. 4, Black Warrior river, Alabama, will be received at United States Engineer Office, Tuscaloosa, Ala., until September 13. Information furnished on application to United States Engineer Office, Mobile, Ala., or to Assistant Engineer R. C. McCalla, Tuscaloosa, Ala.

Machine Tools.—Weld & Neville, Houston, Texas, are in need of three lathes of about 12-inch swing, and three drill presses to take drills up to and including one inch.

Oyster Tongs.—W. W. Cherry, Columbia, Tenn., wants to purchase a pair of oyster tongs.

Paving Brick.—Sealed proposals will be received at office of city engineer, Danville, Va., until August 30 for furnishing vitrified paving brick or blocks for paving a street containing approximately 20,000 square yards; brick to be delivered free on board cars in Danville; each proposal to be accompanied by samples of at least twelve brick, showing character of brick to be furnished, giving name of manufacturer and location of factory. The proposals will state when the delivery of brick will be begun and how fast they will be furnished. Satisfactory bond will be required of successful bidder. Usual rights reserved. Address C. A. Ballou, city engineer.

Piping, etc.—J. B. Kendall, 618 Pennsylvania avenue, Washington, D. C., wants about 1000 feet of four or four-and-one-half-inch iron pipe, new or second-hand, in good order, with sockets and good threads; also a 25 or 30-horse-power locomotive boiler on skids complete, with stack and all trimmings, new or second-hand, but must be first-class condition; for delivery on N. & W. R. R. in Virginia.

Plumbing.—See "Heating Apparatus, etc."

Railway Equipment.—James G. Boyd, secretary Bluffton & Blakely Railroad, Blakely, Ga., is in the market for steel rails and wants quotations from dealers.

Railway Equipment.—Chattanooga Ore Co., C. E. Buck, president, Chattanooga, Tenn., will need a good-size hoisting engine, a large quantity of second-hand 16-pound rails, mining cars, scales, etc.

Reduction Works.—Correspondence is wanted with manufacturers of machinery for the reduction of crude graphite deposits. Address James G. Miller, care U. S. Cast Iron Pipe & Foundry Co., Chattanooga, Tenn.

Rice Plant.—See "Starch Factory."

Saw Mill.—Girton & Busbey, Winchester, Tenn., want to purchase a small portable saw mill.

Scales.—See "Starch Factory."

Scales.—See "Railway Equipment."

Shingle Mill.—R. G. Williams, No. 368 Buncombe street, Greenville, S. C., wants to correspond with manufacturers of shingle-mill machinery.

Sign Plates.—Edwin E. Clayton, care of Roanoke Times, Roanoke, Va., wants addresses of manufacturers of sign plates, door plates, metal letters, etc.

Starch Factory.—Planters' Manufacturing Co., F. G. Perkins, president, Lake Mary, Fla., wants catalogues, etc., on 100-horse-power plant, with dry-kilns, electric plant, scales, boilers, rice plant, etc.

Tallow Refinery.—See "Fertilizer Factory."

Water Works, etc.—The town of Jackson, Ala., wishes to correspond with parties who drill artesian wells and put in small systems of water works. Address S. A. Adams.

Water Works.—The board of commissioners, Crisfield, Md., will receive sealed proposals until August 31 for construction of an entire water-works system; specifications and information can be had from J. E. Sterling, secretary. E. M. Kenly of Baltimore is the engineer.

Water Works.—Sealed proposals in triplicate will be received until August 26 at office of chief quartermaster, Atlanta, Ga., for construction at Fort Screven, Tybee Island, Ga., of a water-supply system in accordance with plans and specifications to be seen at office mentioned or at office of quartermaster at post. Usual rights reserved. Envelopes should be marked "Proposals for Construction at Fort Screven, Tybee Island, Ga.," and addressed to John Simpson, D. Q. M., etc. Specifications, general instructions to bidders and blank forms of proposals furnished on application.

Woodworking Machinery.—Kibler & Kay, Kibler, Va., want addresses of manufacturers of machinery for making insulator holders out of timber; also the addresses of dealers in holders.

Woodworking Machinery.—W. V. Tennant, Albert, W. Va., will be in the market for machinery for making insulator pins.

Woodworking Machinery.—York Manufacturing Co., Audubon, N. J., is in the market for a second-hand (Defiance) spoke lathe and a set of finishing machines.

Woodworking Machinery.—Shreveport Hardwood Lumber Co., Limited, W. K. Henderson, president, Shreveport, La., wants to correspond with manufacturers of machinery for making boxes.

Woodworking Machinery.—Girton & Busbey, Winchester, Tenn., are in the market for a second-hand outfit of handle machinery.

Zinc Ores.—R. A. Bowie, Bristol, Tenn., wants prices of zinc ore averaging 50 per cent. zinc, delivered to furnaces; also addresses of ore buyers.

TRADE NOTES.

Growth of the Public Laundry.—In this country the public laundry has been more largely patronized in the past year than ever before, according to a prominent laundry-machinery maker. There is a decided increase in the sending of the family washing to the public laundry, and it is predicted that this will become more general every year. This increase has caused a corresponding increase in the demand for machinery for laundrying purposes, and American manufacturers of this class are supplying their equipments throughout the world. The Adams Laundry Machine Co. of Troy, N. Y., is one of the prominent laundry-machinery makers of this country, application to whom for information will receive timely reply.

Contracts for Ice Factories.—Probably in no line of modern machinery building is there more relative activity than in that for artificial ice manufacturing. Both for ice and refrigerating purposes this class of machinery is in increasing demand. The York (Pa.) Manufacturing Co. is securing a large share of the new contracts placed for ice machinery; its most recent orders included a complete 100-ton plant at Philadelphia, two 25-ton refrigerating machines and a 10-ton ice plant for brewery located in Honolulu (Hawaiian Islands), two 125-ton refrigerating machines and 50-ton ice plant for brewery at Pittsburg, and two 150-ton refrigerating machines and a 150-ton ice plant (with piping for 400,000 cubic feet of cold-storage space) in Pittsburg.

Fire Escape's Increasing Popularity.—The merits of the spiral fire escape, invented by Mr. Bender, are such as to obtain recognition immediately upon investigation. The increasing orders for this device prove that its merits are becoming widely known. The American Tobacco Co. has ordered one of these fire escapes for one of its Baltimore (Md.) branches, its second order for this escape. It is cylindrical in form, six feet in diameter and eighty-six feet high, composed of sheet steel, thick at the base and tapering to a less degree at the top. Through the center runs a three-inch steel standpipe, for carrying water in case of fire, and from which seven streams of water can be thrown at one time. There are hose connections at each floor, while on the outside of the cylinder will be a ladder for the convenience of firemen. The descent is made by means of a spiral floor, access to which is had by seven inlets, one from each floor, whereby one may seat himself or herself and slide to safety on the ground below. The grade is such that it consumes less than a minute in the descent, yet so nicely graduated that the speed at the bottom is no greater than when the slide is begun. The doors at each floor open inward and close automatically, preventing smoke and flame from entering. There are thirteen turns in the cylinder at an angle of seven feet to each turn. The floor is composed of sheet steel, with no sharp corners or edges. The Dow Wire Works Co. of Louisville, Ky., builds this escape.

Brown's Roasting Furnace Patents Valid. There has been issued a pamphlet entitled "Warning!" relative to the decision of Judge Moses Hallett sustaining the patents of Horace F. Brown on roasting furnaces and declaring the Ropp furnace an infringement. This pamphlet gives the judge's opinion in full, and is especially called to the attention of the mining fraternity by Messrs. Fraser & Chalmers of Chicago. This corporation enjoys the exclusive right to manufacture the Brown furnaces.

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

STILWELL TO CONTROL.

Plan of Kansas City, Pittsburg & Gulf Reorganization.

Notice is given by a committee, of which Mr. Wm. F. Harry is chairman, that it has prepared a plan of reorganization of the Kansas City, Pittsburg & Gulf Railroad. The plan provides for the formation of a new company to acquire the property of the existing Kansas City, Pittsburg & Gulf Railroad Co., and at least a majority of the stocks of the Kansas City Suburban Belt Railroad Co. and the Port Arthur Channel & Dock Co., thus bringing the whole system under one ownership and management. It is proposed to issue \$30,000,000 of first mortgage 50-year 4 per cent. gold bonds, to be secured upon all the property to be acquired, \$20,000,000 non-accumulative 4 per cent. preferred stock and \$30,000,000 common stock. September 20 is the date when the opportunity will end for holders of securities to become parties to the reorganization.

It is understood that under this plan of reorganization Mr. Stilwell will again control this important railroad. Such a signal victory over contending forces which combined to crush Mr. Stilwell demonstrates a very remarkable power. It is a matter of congratulation that the man who conceived this brilliant railroad enterprise, and whose energy carried it through the panicky times, is to return to its management with sufficient backing to push forward all of his far-reaching plans.

Virginia Banks.

The report of the seventy-two State and private banks of Virginia show resources at the close of the fiscal year of \$24,659,511; capital stock, \$4,687,344; surplus fund, \$1,367,349; other undivided profits, less expenses and taxes paid, \$856,349; dividends unpaid, \$80,680; deposits, \$16,507,979; due other banks and bankers, \$772,615; all other liabilities, \$387,496.

North Carolina Securities.

Ten bids were made for the \$60,000 worth of 10-year 4 per cent. coupon bonds of North Carolina, the issue of which was authorized by the last legislature for the purchase of the State farms. The bonds were awarded to the Wachovia Loan & Trust Co. of Winston, N. C., at \$62,250, which is equivalent to \$108.75.

New Corporations.

The Deposit Bank of Brownsville, Ky., capital stock \$10,000, has filed articles of incorporation.

A new bank will be opened about October 1 at Stephenville, Texas, with \$50,000 capital stock.

Salvin E. Bankert is cashier of a new savings bank opened at Union Mills, Carroll county, Maryland.

The Farmers and Traders' Bank of Owensboro, Ky., capital stock \$30,000, has filed articles of incorporation.

The Salisbury Savings Bank of Salisbury, N. C., has been organized, with L. S. Overman, president; A. H. Boyden and W. F. Snider, cashier.

The Jacksonville Loan & Insurance Co. of Jacksonville, Fla., has been incorporated, with a capital stock of \$500,000, to succeed the Jacksonville Loan & Improvement Co.

The Citizens' Bank of Athens, Ala., has been organized, with \$50,000 capital stock. Ben Lee Allen is president; W. R. Pryor, vice-president, and William Peebles, cashier.

J. H. Blackburn, W. T. S. Blackburn and T. M. Dora are incorporators of the Bank of Germantown at Germantown, Ky., which will open business January 1 next with a capital stock of \$16,500.

The Washington Savings & Loan Co. of Washington, D. C., has been incorporated, with a capital stock not greater than \$500,000 and not less than \$5000. Joseph W. Blanton is president; G. H. Clark, vice-president, and B. J. Wherry, treasurer. The other directors are C. E. Belvin, A. G. Botts, C. E. Blanton and Frank Cunningham.

New Securities.

The citizens of Newnan, Ga., have decided upon a \$20,000 sewer bond issue.

The city council of Harrisonburg, Va., has voted to issue \$20,000 bonds for a sewer system.

The town of Kinston, N. C., has decided to issue \$25,000 worth of bonds for improvements.

The attorney-general has approved an issue of \$28,000 bridge refunding bonds of Young county, Texas.

The city council of Augusta, Ga., has decided in favor of issuing \$66,000 3½ per cent. refunding bonds.

The county commissioners of Wharton county, Texas, have decided to issue \$1000 5 per cent. bridge bonds.

Bardwell, Ky., has voted to issue \$6000 6 per cent. water-works bonds. Bids will now be received by C. V. Heoslet.

The Wellsburg National Bank has purchased the \$20,000 4 per cent. school-building bonds of Wellsburg, W. Va.

The city council of Wheeling, W. Va., has voted for the issuance of \$3000 Cemetery Hill road and \$2500 street-extension bonds.

F. M. Stafford & Co. of Chattanooga, Tenn., have purchased the \$20,000 5 per cent. refunding bonds of Fort Gaines, Georgia.

Messrs. Townsend, Scott & Son of Baltimore have been awarded the \$20,000 5 per cent. improvement bonds of Crisfield, Maryland.

The mayor and aldermen of Huntsville, Ala., will shortly be called upon to consider a proposition to issue \$20,000 school-building bonds.

Bids will be received up to September 4 for the purchase of the \$5000 5 per cent. courthouse bonds of Conecuh county, Alabama. Address F. J. Dean, judge of probate, Evergreen.

The attorney-general has approved the issuance of \$11,000 bridge bonds by Uvalde county, Texas, and also the issuance of \$7000 city hall and \$7000 street improvement bonds of Victoria, Texas.

Financial Notes.

The Birmingham city council has confirmed the issue of \$45,000 improvement bonds.

The tax rate for State purposes for 1899 in Georgia has been fixed at \$5.36 on the \$1000.

The State school fund of Texas has in the State treasury \$1,926,000 to be invested in bonds.

The Bank of Mercer at Princeton, W. Va., has been succeeded in business by the Princeton Banking Co.

The Mutual Loan & Building Co. of New Orleans, La., has declared a dividend of 4 per cent. semi-annual.

An effort will be made to have a bond issue at Cuero, Texas, to construct an electric-light and power plant to be run by the city.

The Knoxville Clearing House has

chosen Oscar M. Tate, manager; H. T. Ault, president, and Charlton Karns, vice-president.

The City National Bank, recently organized at San Antonio, Texas, has assumed the business of the firm of R. E. Stafford & Co., bankers.

The \$50,000 issue of Raleigh, N. C., township school bonds, recently sold for 116.38, are now offered by their purchasers at 119.35, with accrued interest.

The special session of the Louisiana legislature resulted in the passage of the bill permitting the city of New Orleans to incur indebtedness for water and sewerage improvements.

The comptroller of the treasury has authorized the treasurer of the United States to purchase 3.65 per cent. bonds of the District of Columbia for the sinking fund of the District.

The Alabama Trust & Banking Co. of Birmingham has elected G. B. McCormack, president, and George B. Ward, cashier. The first bank of the company will be opened at Sheffield.

The Board of Trade of Vicksburg, Miss., is endeavoring to have the city construct a sewerage system, for which it was authorized by the last legislature to issue \$100,000 worth of bonds.

The Continental Trust Co. of Baltimore, Md., will be the trustee of the mortgage on the cotton-duck properties purchased by the Mount Vernon-Woodberry Cotton Duck Co. of Baltimore, Md.

Stockholders of the Bank of Louisville, Ky., now in process of liquidation, will receive a dividend of 100 per cent. The liquidators have already realized \$710,000 of \$750,000 assets by the sale of the assets and business to the Southern National Bank.

Single Fare to Baltimore and Return via Pennsylvania Railroad, Account Presentation of Sword to Captain Dyer of the U. S. S. "Baltimore."

For the occasion of the presentation, on September 12, 1899, of a sword of honor to Captain Dyer of the United States cruiser "Baltimore" for his heroic action in the Battle of Manila, the Pennsylvania Railroad Co. will sell special excursion tickets from stations on its line in the States of Maryland, Delaware, the District of Columbia and the State of Pennsylvania as far north as York, to Baltimore, at rate of single fare for the round trip (minimum rate, fifty cents). Tickets will be sold September 11 and 12, and will be good to return until September 13, inclusive.

Niagara Falls Excursions—Low-Rate Vacation Trips via Pennsylvania Railroad.

September 7 and 21 and October 5 and 19 are the dates of the remaining Pennsylvania Railroad popular 10-day excursions to Niagara Falls from Baltimore.

Excursion tickets, good for return passage on any regular train, exclusive of limited express trains, within ten days, will be sold at \$10 from Baltimore. A stop-over will be allowed at Buffalo, Rochester, Canandaigua and Watkins within the limit returning.

A special train of Pullman parlor cars and day coaches will be run with each excursion. An extra charge will be made for parlor seats.

An experienced tourist agent and chap-eron will accompany each excursion.

Tickets for a side trip to the Thousand Islands (Alexandria Bay) will be sold from Rochester in connection with excursions of September 7 and 21, good to return to Rochester or to Canandaigua via Syracuse within five days, at rate of \$5.50.

Tickets for a side trip to Toronto will be sold at Niagara Falls for \$1 on September 23. In connection with excursion of September 7, tickets will be sold to Toronto and return at reduced rates, account Toronto Fair.

For pamphlets giving full information and hotels, and for time of connecting trains, apply to nearest ticket agent, or address B. Courlaender, Jr., passenger agent, Baltimore and Calvert streets, Baltimore.

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Reduced Rates to York, Pa., via Pennsylvania Railroad, Account Sesqui-Centennial.

On account of the Sesqui-Centennial to be celebrated at York, Pa., September 3 to 6, 1899, the Pennsylvania Railroad Co. will sell special excursion tickets from Baltimore and intermediate stations, including stations on branch lines, to York, at rate of single fare for the round trip (minimum rate twenty-five cents).

Tickets will be sold September 2, 3, 4, 5 and 6, good to return until September 7, inclusive.

G. A. R. Encampment, Philadelphia—Reduced Rates via Pennsylvania Railroad.

On account of the Thirty-third Annual Encampment of the Grand Army of the Republic, to be held at Philadelphia on September 4, 5, 6, 7, 8 and 9, the Pennsylvania Railroad Co. will sell excursion tickets from Baltimore to Philadelphia at rate of \$3.

Tickets will be sold on September 2, 3, 4 and 5, good to return until September 12, inclusive; but by depositing ticket with joint agent at Philadelphia on September 5, 6, 7, 8 or 9, and the payment of fifty cents, return limit may be extended to September 30, inclusive.

Side Trips.—Tickets for side trips to Washington, Old Point Comfort, Gettysburg, Antietam and Virginia battlefields will also be sold at greatly-reduced rates.

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				Holmes-Rose Electric Co.	32	Tiemann, D. F., & Co.	25		
				Holt, S. L., & Co.	28	Toles, W. C., & Co.	32		
				Homer, Charles C.	26	Tompkins, D. A., Co.	1		
				Hooker Steam Pump Co.	39	Toomey, Frank	28		
				Hoopes & Townsend Co.	18	Torbert & Peckham	19		
				Hunt, C. W. Co.	25	Tower-Binford Electric & Mfg. Co.	42		
				Hutchinson Bros.	26	Tower & Wallace	6		
				Huthers Bros.	1	Tranter-Davison Mfg. Co.	39		
				Hyatt Roller Bearing Co.	10	Trenton Iron Co.	2		
				Hyde Bros. & Co.	29	Trenton Iron Co.	2		
						Trevor Mfg. Co.	33		
						Triumph Electric Co.	42		
						Trustee	27		
					</				

Ads. marked thus * appear every other week.
Ads. marked thus † appear in first issue of each month.
Ads. marked thus ‡ not in this issue.

PROPOSALS.

PLANS WANTED.

Plans wanted for a Catholic church, brick and stone; will be received until December 1st, 1899, address J. J. GARRY, Roanoke, Va., for particulars. Right reserved to reject any or all plans.

U. S. ENGINEER OFFICE, Wilmington, N. C., August 4th, 1899. Sealed proposals for furnishing steel, iron or wood Tug-Boat about 90 feet long, with compound engines, will be received here until 11 A. M., September 4th, 1899. Information furnished on application. E. W. VAN C. LUCAS, Capt., Engrs.

U. S. ENGINEER OFFICE, Wilmington, N. C., August 10, 1899. Sealed proposals for furnishing Steam Inspection Boat, new or second hand, about 75 feet long, will be received here until 11 A. M., September 11th, 1899. Information furnished on application. E. W. VAN C. LUCAS, Capt., Engrs.

NOTICE.—Water Works Contract—Sardis, Miss., Aug. 7th, 1899. Sealed bids for the construction of the Water Works in said town of Sardis, according to the plans and specifications now on file in the mayor's office, will be received by the undersigned clerk of said town up to 7:30 o'clock P. M., Tuesday, September 5th, 1899. A copy of plans and specifications and further information furnished upon application. Board reserves the right to reject any or all bids. By order of the Board of Mayor and Aldermen.

C. W. DUVAL, Town Clerk.

SALE OF BONDS.

SARDIS, MISS., AUG. 7TH, 1899. SEALED BIDS for Sardis Water Works Bonds to the amount of \$12,000.00, due and payable in 20 years 'straight', with 5 per cent. interest, payable annually, will be received by the undersigned clerk of said town up to 7:30 o'clock P. M., Tuesday, September 5th, 1899. The Board reserves the right to reject any or all bids.

C. W. DUVAL, Town Clerk.

SEALED PROPOSALS

from engineers for making Surveys, Plans, Specifications and Cost of Putting in Sewerage System in the City of Greenville, Mississippi, will be received by me up to the 5th day of September, 1899 at which time the City Council will open and consider same. All proposals must be accompanied by references of the skill and ability of the party to do the work proposed.

J. M. LEE, City Clerk.

WANTED TO SELL,

\$8,000.00 Preferred Stock in Orion Knitting Mills, Kinston, N. C.

redeemable in ten years, to refund an equal amount now outstanding which is redeemable October 1st, 1899. Object of re-issuing is to get a lower rate of interest.

The stock is a first lien upon all the property of the Corporation; value over \$30,000.00 and becomes due upon forfeiture of interest, which is due semi-annually, April and October 1st. Bids considered on basis of lowest rate of interest offered. Particulars on application.

J. F. TAYLOR, Sec'y and Treas.,

ORION KNITTING MILLS.

NOTICE TO CONTRACTORS.

Sealed proposals will be received by the undersigned County Commissioners of Wayne County, West Virginia, at their office at Wayne C. H. until 12 o'clock noon (standard time) on Monday, September 11th, 1899, for the construction of the following work: 1. For the excavations, foundations and masonry abutments in the substructure of the Beech Fork Bridge, near Bowen P. O. 2. For the steel and iron superstructure for above. 3. For the steel and iron superstructure for the two spans over Gragstone Creek, near the Big Sandy River. All to be done in accordance to plans and specifications on file in the office of the County Clerk, after the 15th day of August. The work will be let in separate contracts, or as a whole if lower tender are received than in separate bids. The Court reserve the right to alter and amend the plans up to the day of letting. And specially reserve the right to reject any or all bids.

Given under our hands this 17th day of August, 1899. JAMES MCQUIN, President. H. A. JACKSON, Commissioner.

WAYNE COUNTY COURT.

Envelopes for \$1.05 per M. Until Sept. 15, 1899, we will accept orders for good XXX White No. 6 1/2 Envelopes, printed with name, address and "return" for \$1.05 per M in lots of 10 M or more. Good work guaranteed. Samples furnished. Order quick.

ALLAN NICHOLSON PRESS,

"Prompt Printers," UNION, S. C.

D. F. TIEMANN & CO.

Paint & Color Manufacturers
NEW YORK.

Snow White Zinc, Window Blind Green
and X. L. Black.

TO CONTRACTORS.

If you have any municipal bonds or warrants, taken in payment for building water works, court or school houses, jails, etc., write us. Conditions being favorable, we can use them.

F. M. STAFFORD & CO.

Dealers in Southern Municipal Securities,
Chattanooga, Tenn.

THE AUDIT COMPANY
OF NEW YORK.

Equitable Building, 120 Broadway.

ACTING PRESIDENT,
AUGUST BELMONT.

VICE-PRESIDENT,
WILLIAM A. NASH.

MANAGER,
THOMAS L. GREENE.

CHIEF CONSULTING AUDITOR,
STEPHEN LITTLE.

CONSULTING ENGINEERS,
WM. BARCLAY PARSONS, F. S. PEARSON,
FORD, BACON & DAVIS.

SECRETARY AND TREASURER,
EDWARD T. PERINE.

DIRECTORS:

August Belmont, A. J. Cassatt,
Frederic P. Olcott, Marcellus Hartley,
James Stillman, Charles R. Flint,
William A. Nash, George Coppell,
Joseph S. Auerbach, G. B. M. Harvey,
George G. Haven, John I. Waterbury,
George W. Young.

ADVISORY COMMITTEE OF STOCK-
HOLDERS:

W. Bayard Cutting, T. Jefferson Coolidge, Jr.
Walter G. Oakman, Charles S. Fairchild,
A. D. Juilliard, Gustav E. Kissel,
Henry W. Poor, Isaac N. Sellman,
Louis Fitzgerald, E. R. Chapman.

The Audit Company examines and reports upon the accounts and financial condition of corporations, copartnerships and individuals, and examines and reports upon the physical condition of railroad, manufacturing and other properties. Its services are of value to investors, financial institutions, borrowers of money, directors of corporations, merchants, firms and purchasers of properties.

The American
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OF BALTIMORE, MD.

Capital, \$1,000,000.00.
Surplus and Reserve, \$500,000.00.

A Bonding Company

with agencies everywhere. Accepted as surety on all bonds required to be given under the laws of the U. S. Government or the laws of the several States.

Prepared to Furnish

bonds for Merchants and Manufacturers for Costs, Attachment and and Replevin cases and recommend Reliable Attorneys at every point of acceptance in the United States.

Telegraphic Service
if necessary.

Home Office: BALTIMORE, MD.

Southern Investments.

Stocks, Bonds and
Industrials.

American Promoting & Trust Co.
23 Deane St., BOSTON.

The New "General Corporation Laws"
of the State of Delaware.

Fulllest security to stockholders. Minimum of annual taxes. Certain classes of corporations exempt from taxation. Meetings may be held outside the State.

Full Information, Copies of the Law, Blank Forms, etc., furnished upon application.

DELAWARE TRUST CO., Inc.
902 Market Street, WILMINGTON, DEL.

A Giant
among
Lamps.

The most powerful lamp yet devised for mill or factory use or wherever a demand exists for more light than can be supplied by our No. 2 Lamp, the Rochester Tubular. It gives a light of

300 Candle Power
and

Will Not Blow Out
in the most exposed locations.

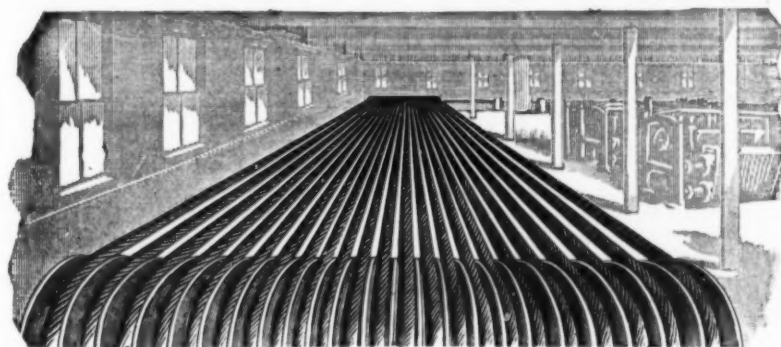
Send for circulars stating requirements.

We make lamps for every purpose.

The Rochester Lamp Co.

38 Park Place and 33 Barclay Street,

... NEW YORK.



Rope for Rope Driving and Hoisting.

The special brand of Rope we make, sold under the Trade name of "Stevodore," is sold with the positive understanding that it will do more work in proportion to its cost than any rope on the market—no exception whatever.

Catalogue No. 9811, just issued, covers the subject of Rope Driving thoroughly, besides containing useful data for engineers not published elsewhere. It is free to those interested.

Please address the works direct.

C. W. HUNT CO., 3 Van St., West New Brighton, New York City.

See that
Clip P

The NIAGARA

For FASTENING PAPERS.

Its merit is in its simplicity.

Made of the best Spring Brass Wire. The loops being formed with a heavy tension, holds securely from the thinnest sheet of paper up to 3/4 inch in thickness, and can be used over and over again. Better than Pins for Filing Letters, Records, Cards, etc. Avoid unsightly pin holes in attaching letters, business cards, checks, etc. Boxes of 100 for desk use.

Price \$1.50 per 1000. Sample Box 20 Cents.

NIAGARA CLIP COMPANY,

32 BROADWAY, N. Y.

Also Buffalo, N. Y.

The Boomer & Boschert
KNUCKLE JOINT
PRESS

For Baling Cloth, Paper, Yarn, &c.

Or for any other purpose requiring great pressure.

BOOMER & BOSCHERT PRESS CO.

386 W. Water St., Syracuse, N. Y.

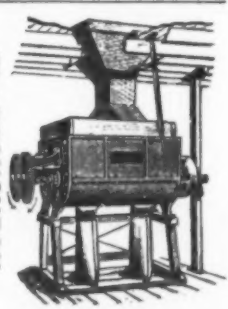
MALCOLM JOHNSTON,
Attorney and Counsellor at Law,

507 PRUDENTIAL BUILDING,
ATLANTA, GA.

Refers to the Judges of the Supreme Court of Georgia, the Judges of the Superior Court, the City Court of Atlanta and the Federal Court at Atlanta, and any Bank in Atlanta; The Link-Belt Engineering Co., Philadelphia, and Messrs. Jones & Carson, Attorneys, Philadelphia.

Special attention given to U. S. Court practice.

W. D. DUNNING
FOR
Hard Plaster, Cement, Paint, &c.
96 W. Water St., SYRACUSE, N. Y.



HELP WANTED.

Advertisements under this head will be inserted hereafter at the rate of one cent a word for each insertion.

WANTED.—A young man who can keep double entry books and do all kinds of office work. One who is familiar with the iron business or has worked in the office of a foundry and machine shop preferred. Also if a stenographer or typewriter will be given the preference. No cigarette smoker need apply. Address in hand writing, PEACOCK'S IRON WKS., Selma, Ala.

SITUATIONS WANTED.

Advertisements under this head will be inserted hereafter at the rate of one cent a word for each insertion.

WANTED.—Open to engagement, a Chemist. Address X, care Manufacturers' Record.

WANTED.—Bookkeeper and office man wants position. 12 years' practical experience with large corporations; age 32; married; hustler; All references; bond or cash security. Address H. GERWEL, 574 W. Court Street, Cincinnati, Ohio.

WANTED.—By thoroughly competent oil mill superintendent, a position with a cotton oil company. Address W. P. COTESWORTH, Atlanta, Ga.

PRACTICAL Analytical Chemist (graduate), seven years' general laboratory experience, familiar with the care and handling of machinery and good hand with men, is open for a position. Address CHEMIST, care Mrs. Record.

WANTED.—Situation by stationary engineer. Able to sell, erect, run and repair. Fifteen years' experience. Very best of references. Speaks Spanish. Temperate. Hard worker. Address ENGINEER, care Mrs. Record.

EDWARD J. ETTING.

IRON, STEEL, PIG IRON,

Land Title Building,

Storage Yard: Old Navy Yard, PHILADELPHIA, PA.

"MOUNT SAVAGE" FIRE BRICK.

"TURNER" WATER TUBE SAFETY BOILER.

"PRIDMORE" MOLDING MACHINES

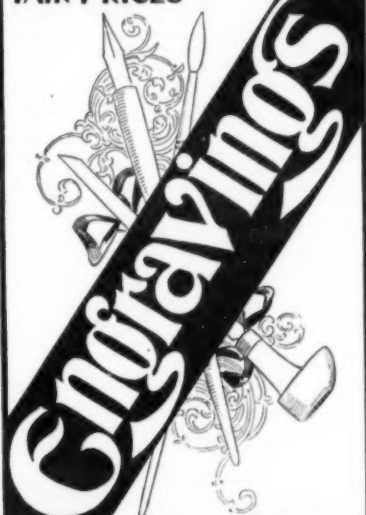
for Iron and Brass Foundries.

"WHITING"

Cupolas, Cranes, Air Hoists and Foundry Equipment.

DAYTON COAL & IRON CO., Ltd., Pig Iron.

**FOR THE MANUFACTURER,
PUBLISHER, PRINTER.
BEST WORK—
PROMPT DELIVERY—
FAIR PRICES—**



**THE BALTIMORE
ENGRAVING CO.
BALTIMORE, MD. U.S.A.**



The "Ever-Ready" Electric Flash Light

IS NOT A TOY, BUT THE MOST PRACTICAL ELECTRIC
LIGHT OF THE KIND EVER INVENTED.

It can be used at any time and for all purposes where a light is required. No wires, no chemicals, no danger. A child can operate it.

Useful for Hunters, Plumbers, Oil Men, Stable Men. Can be taken into a barn or stable full of combustible material with absolute safety. Pocket size. 3½-volt lamp will give from 6000 to 8000 lights before battery requires renewal.

This very useful article will be sent postage paid to anyone sending four (4) subscriptions to the SOUTHERN FARM MAGAZINE, or for two subscriptions and one dollar in cash.

Extra batteries can be purchased from us for 30 cents each.

OFFER No. 109.

FOR SALE.

ONE 15-TON

Yale and Towne Electric Crane,
AS GOOD AS NEW.

Will be sold cheap if taken within the next 10 days. Address

The Norton Electrical Instrument Company,
MANCHESTER, CONN.

IRON FOR SALE.

Grand Stand at Monmouth Park Race Track, New Jersey. Composing Angles 2 in. to 5 in., Cast Iron Columns, Beams, Channels, Girders, Bars, and all the Iron in above stand, about 1,000 tons. Material suitable for New Buildings or Grand Stand.

JOHN LEONARD & COMPANY,
20 BROADWAY, NEW YORK.

HUTCHINSON BROS.

MANUFACTURERS OF

STEEL PLATE

FRENCH RANGES

AND

KITCHEN APPARATUS

—FOR—

HOTELS AND INSTITUTIONS.

Office, 116 N. Howard St.

Factory, West St., near Ridgley,

BALTIMORE, MD.

Correspondence Solicited. Illustrated
Catalogue on application.

Sheep husbandry is a pursuit full of promise for the South, not only as a profitable industry in itself but as a most important factor in the reclamation of so-called worn-out lands. Readers of successive numbers of the SOUTHERN FARM MAGAZINE will learn what the most eminent authorities, and the most successful practical sheep breeders, have to say about sheep in the South. Other live stock, cattle, swine, horses, poultry, will have like attention. Published by Manufacturers' Record Publishing Co., Baltimore.

WILLIS & HOMER, Solicitors,
213 Courtland Street.

RECEIVER'S SALE

OF AN

Established Foundry, Machine and Boiler Works,
Chattles, Stock in Trade, Etc.

OF THE

Campbell & Zell Marine & Boiler Works

I will, in execution of an order of the Circuit Court of Baltimore City, offer for sale by public auction, on the premises (AT THE FOOT OF WOLFE STREET), in the City of Baltimore, on THE FIFTH DAY OF SEPTEMBER, 1899, beginning at 10 o'clock A. M., ALL OF THE LEASEHOLD PROPERTY, TOGETHER WITH THE VALUABLE PATENTS, PATTERNS, MACHINERY, STOCK OF BOILER TUBES, VALVES, PIPE AND FITTINGS, PROPELLOR WHEELS, BAR-IRON, FIG-IRON, MERCHANDISE AND CHATEL PROPERTY OF THE CAMPBELL & ZELL COMPANY, of Baltimore City, that is to say:

ALL THAT LOT OF GROUND situated in said city at the foot of South Wolfe street, on deep water, bounding on Wolfe street, Fells street and on the Patapsco river, known as the "Waters Wharf" or the "Campbell & Zell Marine and Boiler Works," subject to the redemption annual ground rent of \$1710. Improved by a one-story BUILDING, 48 feet by 255 feet, containing Machine Shop, Blacksmith Shop, Engine Room and Boiler Room, a one-story Boiler Shop, 71 feet by 172 feet, and a two-story BRICK WAREHOUSE AND OFFICE BUILDING, 40 feet by 145 feet. These shops are equipped with Modern Tools of such well known manufacturers as the Niles Tool Company, Bement Miles Company, Hilles & Jones and the Brown Hoisting and Conveying Machine Company and others.

AS ALSO ALL THAT LOT OF GROUND situated in said city bounded by Burke, Essex, Concord and Cambridge streets, subject to the annual ground rent of \$1200. This lot is almost completely covered with BRICK BUILDINGS, consisting of a Foundry, Core Shops, Cleaning House, Pattern Shop and Stable, and the premises are equipped with a Traveling Electric Crane and Jib Cranes for handling heavy work. The Pattern Shop is equipped with modern Labor-Saving Machinery and Appliances.

The above-mentioned Lots and the Buildings thereon, and the Tools and Machinery therein, constitute the Marine Machine Shops, Boiler Works and Foundry of the Campbell & Zell Company, which company is the builder of first-class Marine Engines and Boilers and the builder of the "Zell Improved Water-Tube Safety Boiler," and will be offered as a going concern, including therewith the Letters Patent of the "Zell Improved Water-Tube Safety Boiler" and for other Water-Tube Boilers, and the Letters Patent for the Kahler Sewer Inlet, which letters patent are of great value, and if a satisfactory bid is not made therefore the property will be offered separately or in parcels, in the manner to be made known at the time of sale.

Especially attention is called to the following:

BOILER ROOM.
Bement Miles Combination Punch and Shears, double end, 30-inch gap; one Radial Drill, one Steam Riveter Machine, 36-inch cylinder; one Boiler Roll, with 13-inch Top Roll; one 17-inch Planer, all by the same maker; Hilles & Jones' No. 2 Horizontal Punch, one ditto No. 4 Single-End Shear, one ditto 36 inch Single-End Punch, one ditto No. 3 Round-Thread Single-End Boiler Punch, one Newton 24-inch Cold-Sawing Machine, table 32x30; one 10-ton Brown Electric Crane, one Hydraulic Bending Machine, 6-inch cylinder; one Two-Cylinder Clayton Air Compressor, one Horizontal Engine, 9x12, and others.

MACHINE SHOP.
Bement Miles' Latest Improved Engine Lathe, 63-inch swing, 28-inch bed; one ditto, 26x12. One New Haven Lathe, 26x20; one ditto, 24x9; one ditto, 25x11; one Wright Lathe, 20x8. One Jones & Lamson Turret Lathe, 2x24; one Niles Slotter, 18-inch stroke; one Niles Planer, one Detrick & Harvey Open-Side Planer, one Shaper, 20-inch stroke; one Niles Horizontal Borer and Drilling Machine, 4-inch bar; one 60-inch Bement Radial Drill Press, one ditto, 30-inch stationary head; one ditto, 20-inch sliding head; one No. 9 Jarecki Pipe Machine, etc.

ENGINE ROOM.
One Westinghouse 200-ampere Dynamo, one General Electric 70 ampere Dynamo, one Upright Engine, 14x16; one 150-horse-power Zell boiler, Feed Pump, Air Compressor, Tank Switchboard, etc.

SMITH SHOP.
Dudgeon Double Upright Steam Hammer, Bell Single Upright Steam Hammer, six Forges, Fans, Crane, etc.

FOUNDRY.
Cranes, Hoisting Engines and Boilers, Rigger Tools, Blocks and Falls, Derrick, etc.

PATTERN SHOP.
One 10-ton Yale & Towne All-Iron Foundry Jib Crane, one 6-ton Wood Foundry Jib Crane, one 6000-lb. Yale & Towne Hand Traveling Crane, one No. 3 Root Blower, one No. 4 ditto, one Cupola, 30-inch; one ditto, 40-inch; Ladles, Tools, etc.

CIRCULAR VARIETY, SWING, JIG AND BAND SAWS and Tables, one 12x8 Pattern-Maker's Lathe, one ditto, 15x20; one ditto, 40x16; Drill Press, Two-Bench Fox Trimmers, one Joiner, one Marine Engine, 14x16; one Zell Water-Tube Safety Boiler, one Westinghouse 110-volt Dynamo, one Edison Motor, Ladles, Tools, etc.

OFFICE FURNITURE.
CONSISTING OF DESKS, CHAIRS, TABLES, ROLLER-TOP DESK, SAFE, CABINETS, TYPEWRITER, Etc.

MERCHANDISE AND STOCK.
One hundred and fifty tons of Pig-Iron, 50 tons Sand, 40 tons Gravel, 45 tons of Boiler Castings, 22 Propeller Wheels, 5 feet 4 inches to 12 feet; 2 tons Scrap Plates, 12 Steel Drums, 24 to 36 inches in diameter; 800 2-inch to 6-inch Beam and Door Hangers, assorted sizes; 100-H. P. Second Hand Zell Boiler, 885 Globe and Angle Valves, 8,000 Zell Assorted Boiler Bricks, 250 Boiler Tubes, 65 lengths of 2-inch Pipe, one 10-ton Ice Machine, 38 Steam Gauges, 400 ft. Brass Pipe, 94 16-ft. Sections Zell Boiler, 25 tons Rivets, 6,000 Sundry Pipe Fittings, 44,000 assorted Bolts, 3 tons Hexagon and Square Tipped Nuts 3,000 Set Screws, 5,000 Zell Boiler Gaskets, 31 tons Bar Iron and Steel, 18 doz. Files, lot of Oil, Paint, Turpentine, etc., etc, too numerous to mention.

Terms of sale for the Leasehold Property: One third of the purchase money in cash and the balance in two equal payments of six and twelve months or all cash, as the purchaser or purchasers may elect; the credit payments to bear interest and be secured to the satisfaction of the Receiver.

Terms of sale for the Chattel Property (Tools, Machinery, Fixtures, Furniture Merchandise,

etc.): One-third of the purchase money in cash, and the balance to be paid upon the ratification of the sale; credit payments to bear interest from the day of sale and be secured to the satisfaction of the Receiver.

CHARLES C. HOMER, Receiver,
O. A. KIRKLAND, Auctioneer
N. R. Catalogues of the property and any information desired can be procured by application to the Receiver, Auctioneer, Solicitors or upon the premises on and after August 18, 1899.

Hotel For Sale!

At Gainesville, Georgia, on Southern Railway and the terminus of the Gainesville, Jefferson & Southern Railway.

Population six thousand and increasing rapidly. The town has a fine system of water works, electric lights and street cars. This hotel is the ARLINGTON, three stories above basement, fifty chambers, large, fine offices, dining rooms and arcade, five stories on street front. Building is brick, iron cornices and metal roof. Walls were constructed of sufficient thickness to stand another story, which the business of the hotel now warrants. Property now rents for thirty-two hundred dollars, and rent will be increased at expiration of present lease, which is October 1st, 1899. The hotel has the best patronage of any hotel in North Georgia outside of Atlanta. Enjoys the best all-the-year-round patronage of any hotel in the South. Gainesville is the oldest health and summer resort in the South, and for eighty years has been full of health and pleasure seekers from New Orleans to Charleston. When not filled with business and commercial travelers, it is, during the summer months, filled with health and pleasure seekers.

Price thirty-two thousand dollars (\$32,000).

ADDRESS

ALEXANDER & JOHNSON,
Real Estate Agents,

705 Broad St., AUGUSTA, GA.

Fine Water Power, from 1 to 1600 H. P. for Sale or Lease.

In addition to the power, will furnish mill building and tenement houses. Property within ¼ mile of Railroad, in a healthy section of Piedmont, N. C. Fine opportunity for someone wishing to enter the Cotton Mill business. For particulars write to H. C. MACKIE, Granite Falls, N. C.

FOR SALE.

SPOOL AND BOBBIN FACTORY,

situated in the heart of the Southern Mill District, now in operation with plenty of orders on hand. Best of reasons for selling QUICK, or will take an interest with right party. Investigate—a good thing. Address
B. H. W., care of Manufacturers' Record.

WANTED.—Partner with experience and some capital to go in the manufacturing of pants in St. Louis. Address
MANUFACTURER,
Care Manufacturers' Record.

WANTED.—About 1000 feet of 4" or 4½" iron pipe, new or second hand, in good order, with sockets and good threads. Also a 25 or 30 horse power Locomotive Boiler on skids, complete with stack and all trimmings, new or second hand, but must be in first class condition. For delivery on line N. & W. R. R. in Virginia.
J. B. KENDALL,
618 Penna. Ave. N. W. Washington, D. C.

FOR SALE.

Rotary Squeezer for Puddle Mill,

complete and in good order, including brasse. Ready for immediate shipment. Address,
McCULLOUGH IRON CO., Wilmington, Del.

ONE INCH PIPE, AT A BARGAIN,

FOR SALE.

I have fifty thousand feet of good second-hand one inch black pipe for sale, and will sell the whole or any large lot at much less than real value.
G. W. SOULE, Meridian, Miss.

FOR SALE.

As good as new, at less than one-half the price.
One Stearn's Boiler, 14 ft. long, 5 ft. diameter; one Struthers & Well's, Tangye bed, 16x24 Engine, 9 ft. pulley; one Stearn's Saw Mill; one Lockport Shingle Mill; one Abbott's Lath Mill, complete. Will sell any part of above. Address
H. F. ANDREWS, Garland, Pa.

2D-HAND BERRYMAN HEATERS,

all sizes. Taken in trade for our Improved Berryman in perfect order. Tested and guaranteed. Prices reasonable. BENJ. F. KELLEY & SON, Makers, of Liberty St., N. Y.

Machinery Bought, Sold and Erected.
Engines and boilers, all styles and sizes, both new and second-hand; machinery of every description, for all purposes. Write to me for anything you want.
WM. GRUENDLER,
928 N. Main st., St. Louis, Mo.

2 60 H. P. UPRIGHT BOILERS

For Sale Cheap. All complete with Stack and Fittings. A No. 1 condition.
CHAS. REUTER, SON & CO., Baltimore, Md.

SPECIAL Advertisements OF GENERAL Interest. OPPORTUNITIES FOR INVESTORS.

The Mill Man

Will find it to His Advantage

to now Consider the Question of Locating
his Factory on the line of the

Southern Railway

Incomparably the Leading System in the South.

IT RUNS THROUGH Virginia, North Carolina,
South Carolina, Georgia, Alabama, Mississippi,
Tennessee and Kentucky.

And Gives the Greatest Variety of Openings and
Opportunities for all Classes of Factories.

The Advantages of Raw Material, Labor, Cheap Sites, Cheap
Building, Good Markets and Low Taxation (in some cases no
taxation for a series of years) make regions along the **SOUTHERN
RAILWAY** the best in the United States for Profitable Industries.

Permit us to show you what we have to offer.

Correspondence confidential.

M. V. RICHARDS,

Land and Industrial Agent, Southern Railway Co.

Washington, D. C.

For Sale!

CENTRAL PARK

in Ashland, Ky.

The Park is situated almost in the center of the City, and surrounded
by improvements and good residences. It contains 46½ acres and covered
with beautiful growth of virgin forest timber. By reason of activity in
iron, steel, wire, nails, fire brick and lumber, and bountiful supply of natural
gas recently acquired, Ashland is now enjoying its greatest prosperity. 150
dwelling houses could be sold and rented now.

This Company is voluntarily liquidating and will sell the Park as a
whole at a bargain.

KENTUCKY IRON, COAL & MANUFACTURING COMPANY.

TIMBER LANDS IN SOUTH.—135,000 Acres
assorted virgin timber, Cypress, Red and
White Oaks, Gum, Hickory and Cottonwood; cut
10,000 to 12,000 feet per acre, at \$1.50. 110,000 acres
Long Leaf Pine timber, tracts 16,000 to 25,000
acres; cut 4,000 to 7,000 feet per acre, at \$3.50 to
\$5.00 CASH. LOUISIANA, care Mfrs. Record.

WATER POWERS.

Several of the finest undeveloped
Water Powers in the South are now for
sale by

ABBOTT & STEPHENS, Charlotte, N. C.

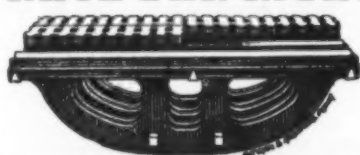
Also Mineral and Timber Lands.

COTTON MILL

FOR SALE.

Millbury Cotton Mills, Millbury, Mass., about
15,000 spindles. Machinery in good condition;
much of it of recent purchase. Steam and water
power. Fourteen tenements and boarding house.
For further particulars address TRUSTEE,
P. O. Box 963, Providence, R. I.

Territory for Sale under patent 621,046 for
GRATE BAR RIGHT.



Big income from royalty. One county in North
Carolina pays \$1,500 per year. One hundred per
cent. profit to manufacturers. Big profit to busi-
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Edison, 1 10-h p Eddy, 2 10-h p Edison, 1 15-h p Westinghouse, 2 15-h p Edison, 1 18-h p T-H, 1 20-h p Westinghouse, 3 25-h p Edison, 1 25-h p National, 1 30-h p Triumph, 1 35-h p Kester, 1 50-h p Mather, 2 60-h p Edison, 1 75-h p National.

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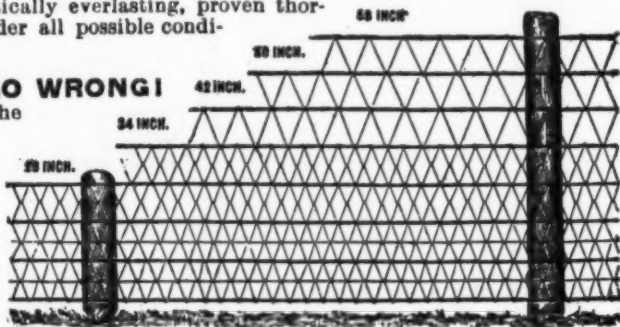
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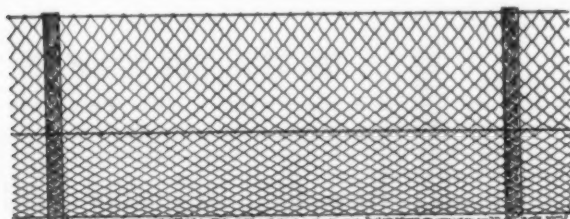
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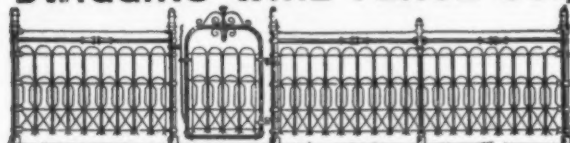
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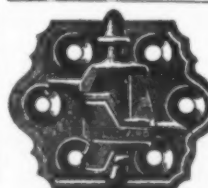
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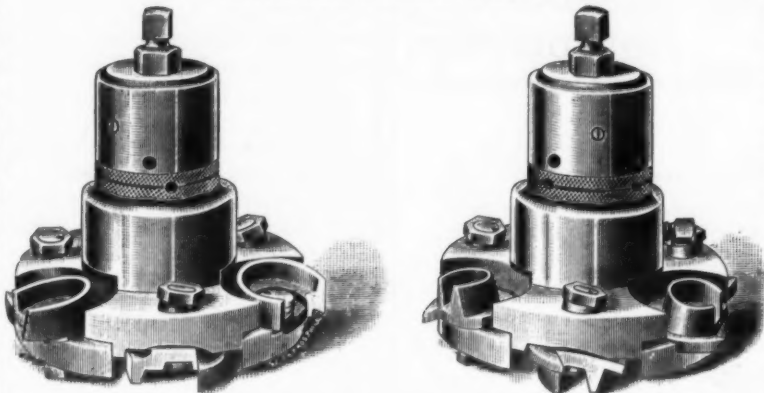
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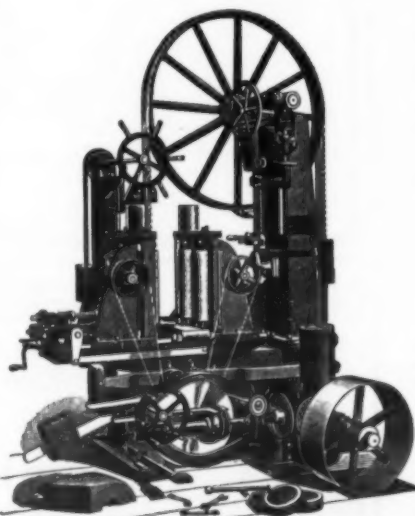
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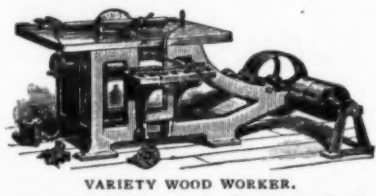


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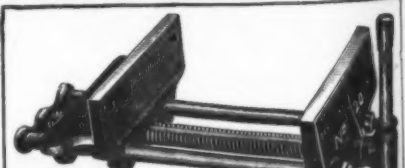
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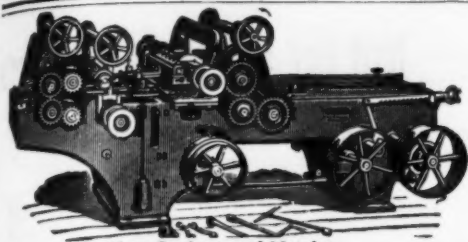
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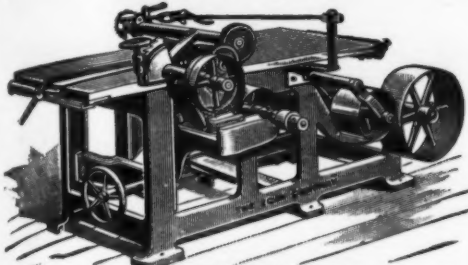
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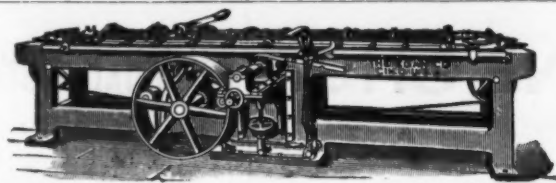
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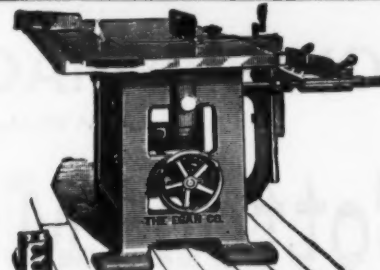
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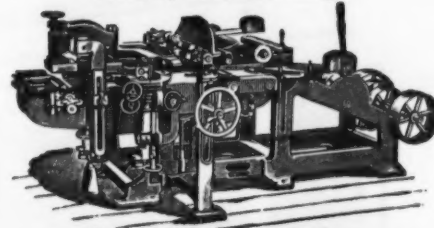
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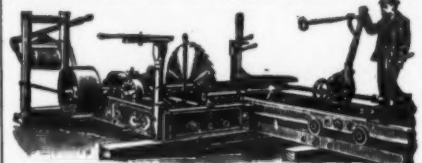
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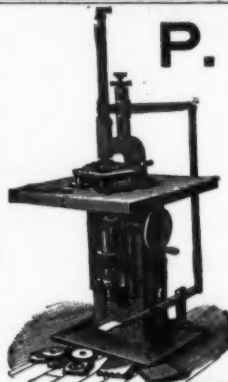


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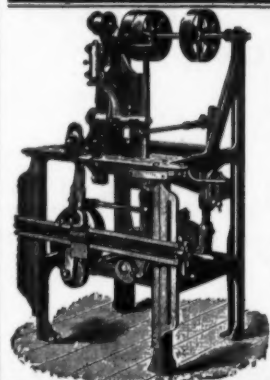
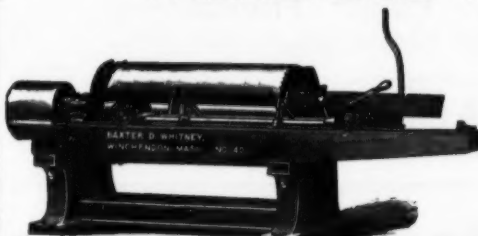
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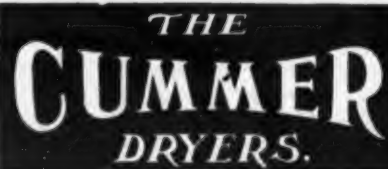


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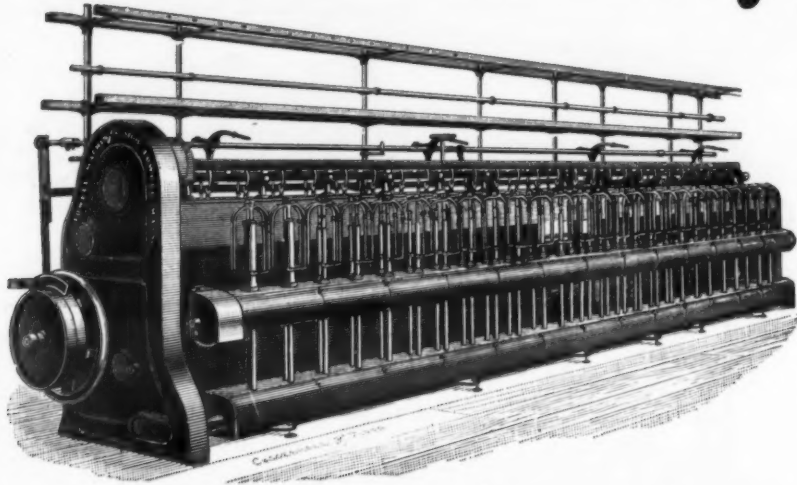
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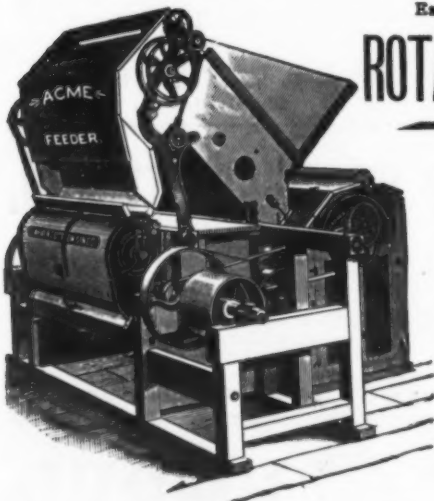
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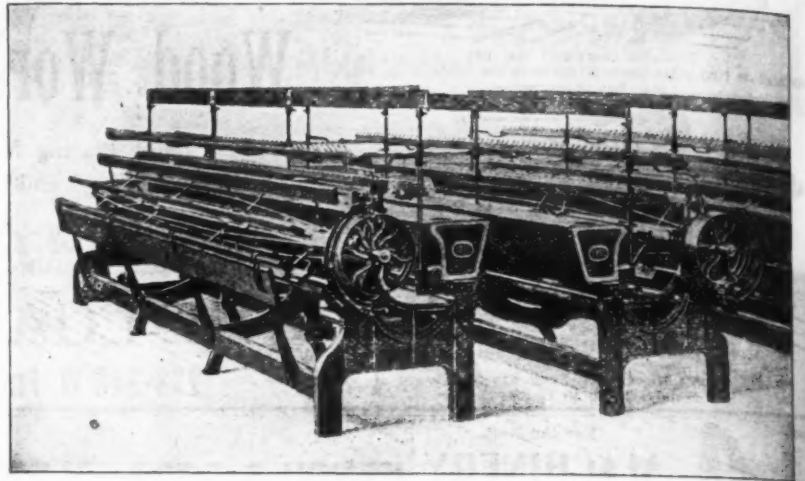
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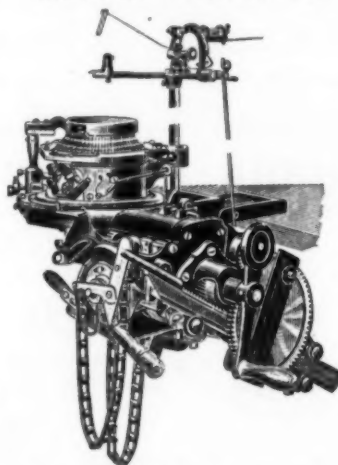
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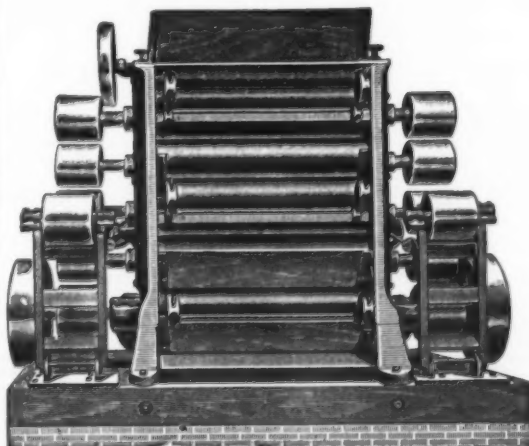
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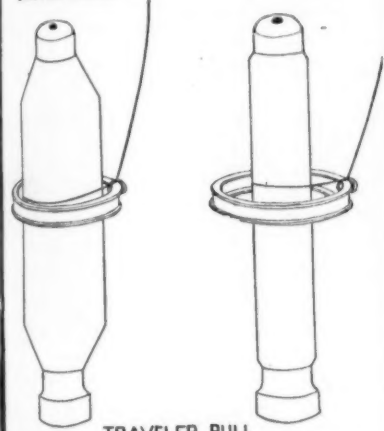
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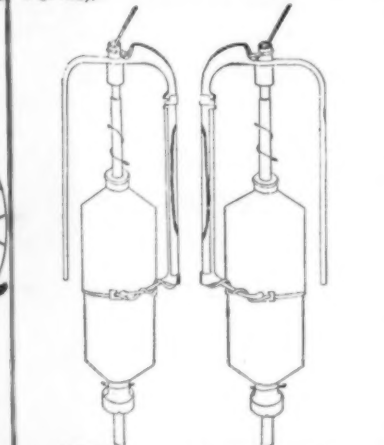
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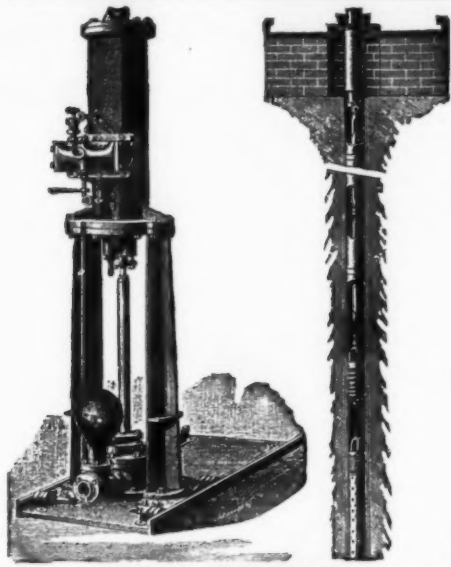
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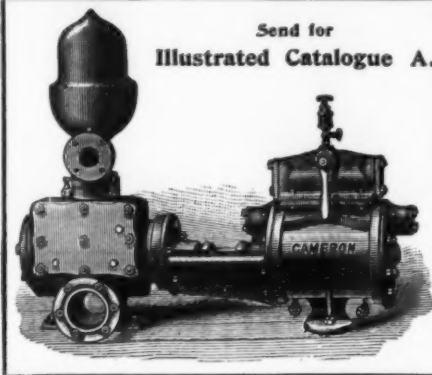


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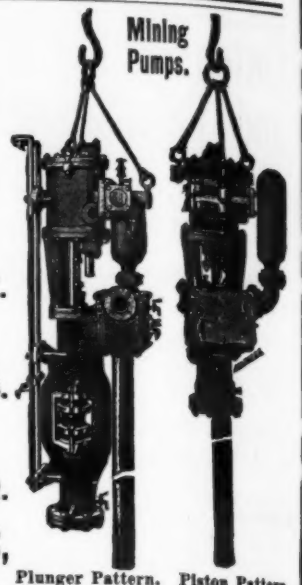
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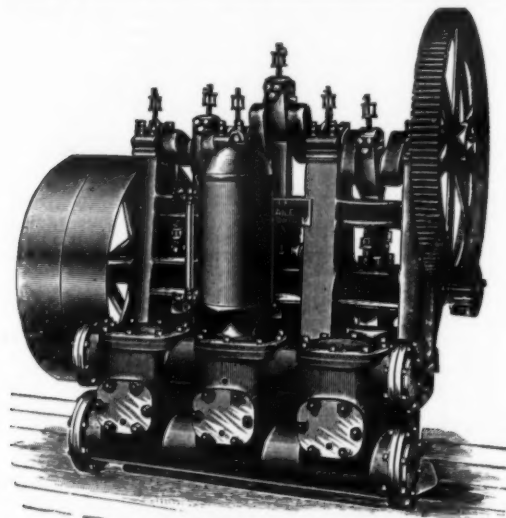
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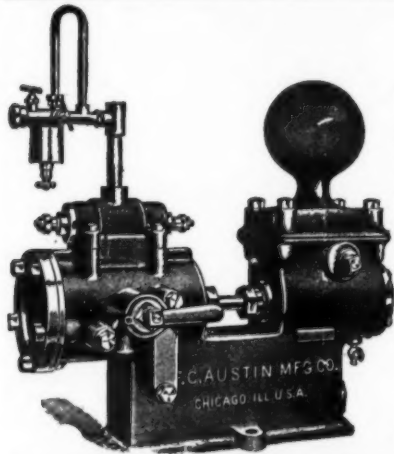
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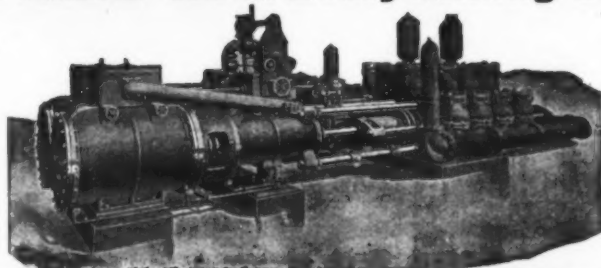
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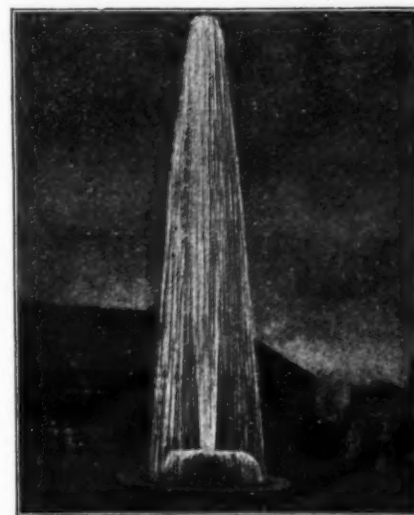
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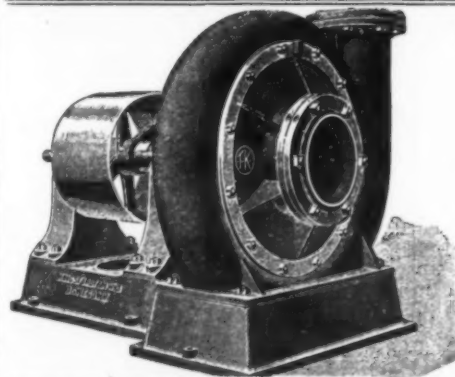
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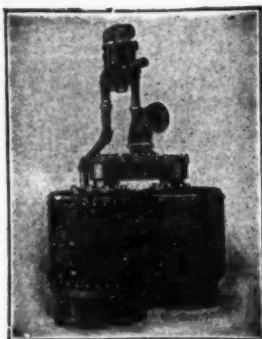
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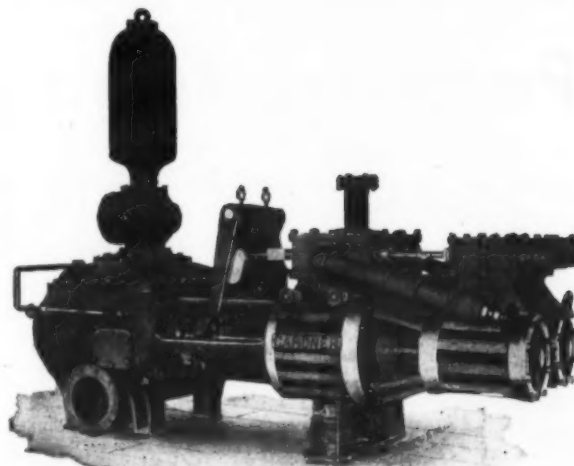
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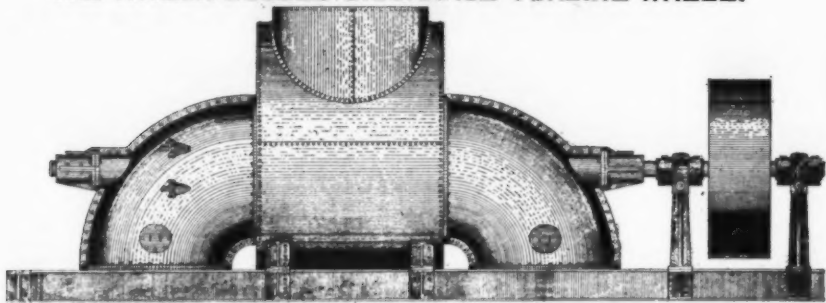
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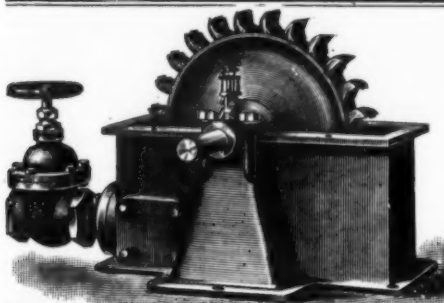
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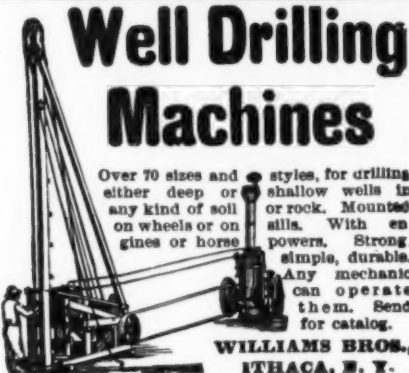
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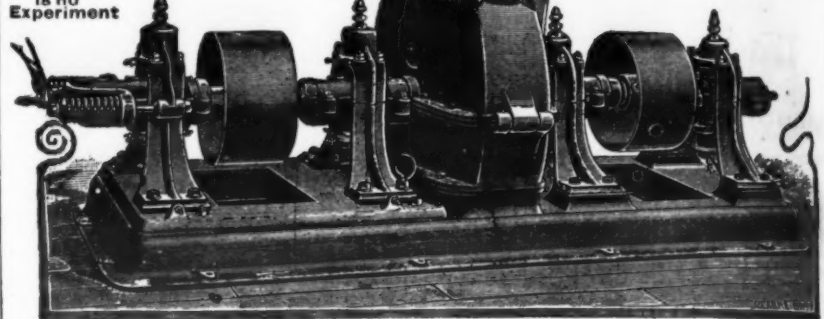
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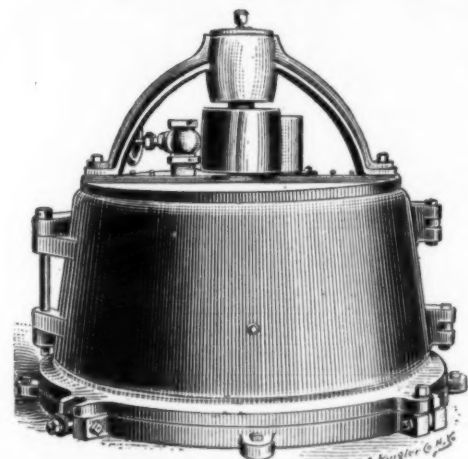
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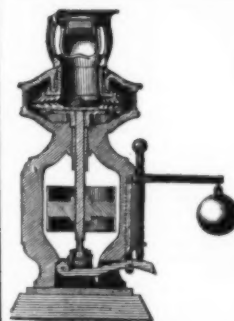
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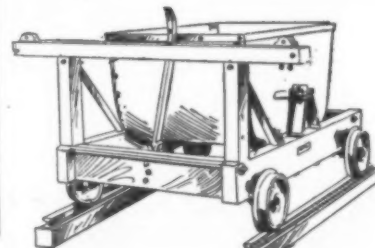
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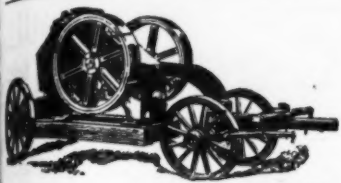
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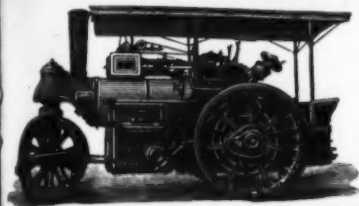
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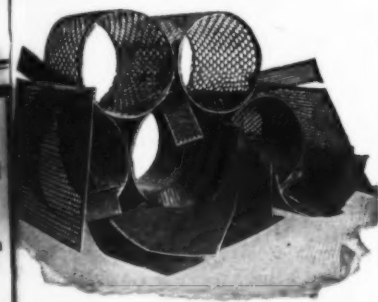
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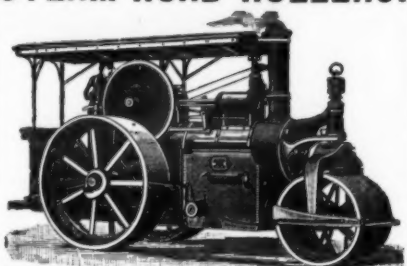
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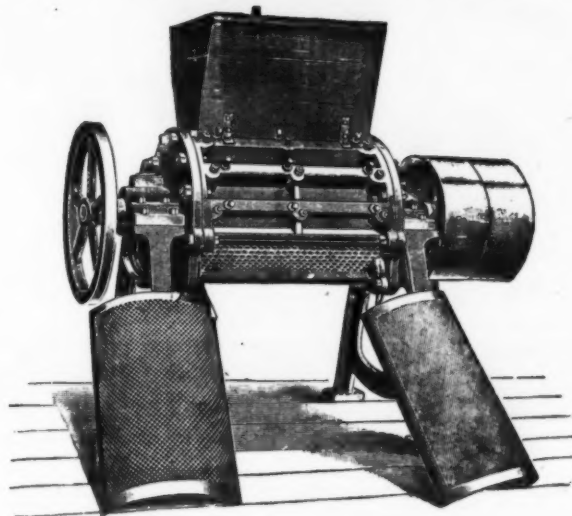
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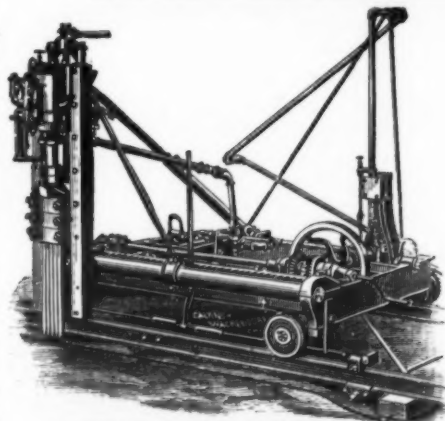
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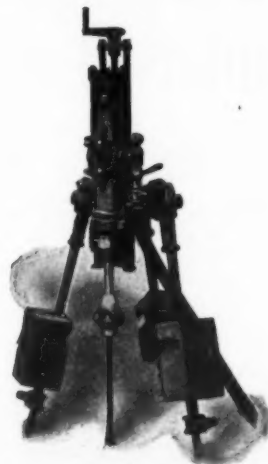
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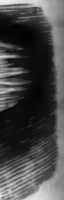
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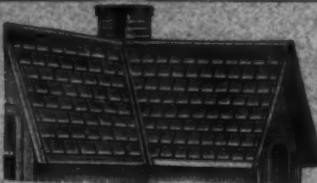
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